



Chartered property,
land and construction
surveyors

BOUNDARIES: PROCEDURES FOR BOUNDARY IDENTIFICATION, DEMARCATION AND DISPUTE RESOLUTION IN IRELAND

3rd edition, Guidance Note



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SCSI Guidance Note, Ireland

Boundaries: Procedures for Boundary Identification, Demarcation and Dispute Resolution in Ireland

3rd edition, Guidance Note

Produced under the auspices of the SCSI Boundaries Working Group

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Document status defined

The SCSI/RICS produce a range of professional standards, guidance and information documents. These have been defined in the table below. This document is a Guidance Note (GN).

Document status defined		
Type of document	Definition	Status
Standard International standard	An international high level principle based standard developed in collaboration with other relevant bodies	Mandatory
Professional SCSI/RICS professional statement (PS)	A document that provides members with mandatory requirements or a rule that a member of firm is expected to adhere to.	Mandatory
Guidance and information SCSI/RICS code of practice	Document approved by SCSI/RICS, and endorsed by another professional body/ stakeholder, that provides users with recommendations for accepted good practice as followed by conscientious practitioners.	Mandatory or recommended good practice (will be confirmed in the document itself). * Recommended best practice.
SCSI/RICS guidance note (GN)	Document that provides users with recommendations or approach for accepted good practice as followed by competent and conscientious practitioners	Recommended best practice. *
SCSI/RICS information paper (IP)	Practice-based information that provides users with the latest technical information, knowledge or common findings from regulatory reviews.	Information and/or recommended good practice. *
SCSI/RICS insight	Issues-based input that provides users with the latest information. This term encompasses thought leadership papers, market updates, topical items of interest, white papers, futures, reports and news alerts.	Information only.
SCSI/RICS economic/ market report	A document usually based on a survey of members, or a document highlighting economic trends.	Information only.
SCSI/RICS consumer guide	A document designed solely for use by consumers, providing some limited technical advice.	Information only.
Research	An independent peer-reviewed arm's length research document designed to inform members, market professionals, end users and other stakeholders.	Information only.

* Usual principles apply in cases of negligence if best/good practice is not followed.

Glossary of Terms

Administrative Boundaries – Administrative boundaries have been enacted by statute to define the extents of administrative areas such as townlands, counties, etc., used by the State to manage these areas for defined purposes.

Alternative Dispute Resolution (ADR) – is a general term used to define a range of approaches and techniques aimed at resolving disputes in a non-confrontational way without the parties going to court. ADR includes mediation, conciliation, arbitration, adjudication, independent expert, and expert determination.

Boundaries and land parcel delineations – A boundary, is where, in spatial terms relative to land in the real world, ownership interest of one landowner ends and another begins. A Land Parcel Delineation is a line on a map indicating the general location and extent of a particular land parcel or plot. In Ireland there are various types of boundaries and land parcel delineations which need to be taken into consideration.

- **Legal Boundary** – A legal boundary is a plane of no width where the rights of one landowner end and those of the adjoining landowner begin, and is as per the definition set out in the deed(s) pertaining to a plot of land. A legal boundary may exist in contexts other than ownership, for instance in defining the spatial extent of rights-of-way or other easements. Also, a legal boundary plane is not necessarily vertical (though normally it is), but can be horizontal or sloped as circumstances dictate. It should be noted that in the context of this document, the legal boundaries under discussion are ownership legal boundaries between properties. Other legal boundaries exist, such as international state boundaries, or administrative and statutory boundaries within the state, for instance those between counties, townlands or constituencies. These latter boundaries are not the subject of this document.
- **Physical feature** – is a physical feature in the landscape, usually linear in form, such as a wall, fence or hedge, which divides land for convenience of use. For instance, a fence, erected by a farmer, within his own property to separate grazing land from tillage, may or may not be a physical boundary feature.
- **Physical boundary feature** – are physical features which also have legal and ownership attributes. They indicate the physical separation between two land parcels in different ownership. They are explicitly described as perceived by the surveyor or as identified by the landowner(s). A physical boundary feature is the boundary feature, existing on the ground at the time of the site inspection, that is used and accepted by the adjoining landowners as their common boundary. Features commonly used as physical boundaries are, hedges, fences, walls, railings, amongst other things. They all occupy three dimensions – length, (width and height, or breadth, and depth) relative to a specified physical feature. A physical boundary feature may not always be present on site.
- **Settled boundary** – a long-standing physical boundary feature which has existed on the ground and has been apparently accepted as the physical boundary feature by both adjoining landowners for an extended period of time.
- **Title Plan** – A large-scale location plan, attached to the Land Registry folio, usually printed at a scale of 1:1,000 for urban areas, 1:2,500 for suburban areas or 1:5,000 for rural areas, which shows the general location and extent of the property delineated in red, in relation to the surrounding properties. In LR, *mapping guidelines* this map, is referred to as the *Land Registry Title Plan*, as distinct from other Land Registry mapping as mentioned in LR rules 146 and 147, i.e., *general and/or index maps*.
- **Title Plan Delineations** – The red lines on the Land Registry Title Plan, which is attached to the property folio. The term Title Plan Delineations will be used with this meaning, i.e., referring to the red outline indicated on the Title Plan, as opposed to the document in its entirety, throughout this publication. The Land Registry operates a non-conclusive mapping system, so it does not guarantee the boundaries or the extent of registered folios. Ordinarily, the Title Plan Delineations and the legal boundary should correspond, since the former is created from the latter, but this must be verified, since mapping procedures in the Land Registry utilises the OSI's topographic mapping to position the Title Plan Delineations on its Title Plan.
- **Defined Boundary** - A boundary that has been defined, to the standards or accuracy and precision set out in this document and agreed between adjoining landowners and formalised in a deed.
- **Conclusive Boundary** – A boundary which has been defined and agreed between two adjoining landowners as conclusive and has been recorded in accordance with Land Registry rules for the creation of conclusive boundaries and which has been registered as such with the Land Registry.
- **Statutory Boundary** – Certain boundaries in Ireland have been defined by statute. The statutory boundaries, most commonly encountered by surveyors dealing with property matters, are the townland boundaries.

These are shown on large scale OSI mapping and the definition of what constitutes each length of boundary is indicated by abbreviated annotations (a full list of these annotations is provided in Appendix N). These boundaries fall under the authority of the Chief Boundary Surveyor and where property boundaries coincide with statutory boundaries, the statutory boundaries should be respected. A surveyor, property owner, or any other person does not have the authority to amend or redefine these boundaries.

Legal boundaries, physical boundary features, and Title Plan delineations do not always coincide. They must always be verified (no assumptions should be made) for processes such as, but not limited to, conveyancing, planning, development and valuation.

Boundary Agreement – A written agreement between adjoining landowners that precisely defines their common boundary, or a portion of it, normally in the form of a deed.

Change Point - In the context of property boundaries, a change point is defined as a point in physical space where the straight-line definitions of a legal boundary intersect or change direction. They will usually be marked by a point feature on a hard physical boundary or a boundary marker in the case of a soft boundary. Change points will normally be further defined by computing ITM coordinates for them.

Chartered Surveyor - For the purposes of this guidance note the use of the term “surveyor” can be taken to mean SCSi members, both chartered (FSCSI & MSCSI) and non-chartered (Assoc. SCSi).

Curtilage - The land within which the building is set and which belongs with it, and is used in conjunction with it. When dealing with protected structures the extent of the curtilage can be difficult to determine because it may not correspond with ownership boundaries.

Deeds - Deeds relating to land ownership are formal documents setting out transactions in land, duly signed and witnessed. They can be in the form of deeds of assignment (normally used for leases), deeds of conveyance, or deeds of transfer used when transferring registered land.

Easements - A right which benefits land known as the dominant tenement, over land in different ownership, known as the servient tenement. A Right of Way is a common form of easement. Easements are usually listed as burdens on Part 3 of the folio of the relevant servient land title and occasionally listed as appurtenances on Part 1 of the Folio of the relevant dominant land title.

First Registration - An application to register previously unregistered land in the Land Registry.

Global Navigation Satellite Systems (GNSS) - The standard generic term for satellite navigation systems that provide autonomous geo-spatial positioning, with global coverage, but more commonly known by the general public as GPS (Global Positioning Systems).

Irish Transverse Mercator (ITM) - The latest spatial reference system for the island of Ireland is called ITM which comprises three elements, GRS80 (Geodetic Reference System 1980), Transverse Mercator projection, and a new national grid. There have been two realisations of ITM to date:

- a) ITM02 – the original ITM spatial reference framework realised in 2002
- b) ITM15 – a new version of ITM spatial reference framework realised in 2015 which improved the framework by millimetres in plan and centimetres in height.

Land/Property – These two terms can be used interchangeably. Surveyors deal specifically with land and structures that stand on land, as opposed to other forms of property. The term land will therefore be preferred throughout this guidance note, though there may be instances where the term property is used because it fits better with the context and general usage.

Land Registry - The Land Registry (LR) is the national land register. The Land Registry database contains two elements, the Title Register and the Mapping Register, both of which have now been digitised and are available online via www.landdirect.ie.

Mediation – The generally accepted description of mediation, be it commercial or otherwise, is a voluntary, non-binding, private dispute resolution process facilitated by a neutral person (the mediator), which enables the parties to reach a mutually negotiated agreement.

Ordnance Survey Ireland Mapping - Ordnance Survey Ireland (OSI) is the national mapping agency. Its large-scale mapping depicts topographical features, i.e., physical features in the landscape. OSI mapping does show administrative boundaries but does not show legal boundaries of properties.

Party structure - A party structure is a structure, such as a wall separating two properties, where the structure is normally considered to be jointly owned by both parties, but in fact each owner has an easement on the half portion of wall not in their ownership. Physical boundaries, such as a wall between properties, may also be wholly owned by one or other of the parties, they may not necessarily be party structures. It should be noted that the respective owners' do not have a shared title

in the space occupied by a party wall (or part feature). Their respective land titles extend to the legal boundary and both have easements over the portion of each other's lands which is occupied by the subject party wall.

Registry of Deeds - The Registry of Deeds, which in essence, is a registry of Deeds which have been executed, was established in 1707. It is not a register of title, and its archive contains summaries of deeds which can only be accessed by reference to the name of the sellers, not the owners. Therefore, this archive is difficult to search and it may not achieve the desired result. Land which is not registered in Land Registry is known as unregistered land. Deeds for unregistered land, which are registered in the Registry of Deeds, normally take precedence both over deeds which are not registered, and over those which were registered later. Memorials from the Registry of Deeds do not contain maps or dimensions for boundaries of land.

Statutory boundaries – Certain legal boundaries which have been defined by statute. The statutory boundaries, most commonly encountered in Ireland by surveyors dealing with property matters, are the townland boundaries. These are shown on large scale OSI mapping and the definition of what constitutes each length of boundary is indicated by abbreviated annotations (a full list of these annotations is provided in Appendix N). These boundaries fall under the responsibility of the Chief Boundary Surveyor and where property boundaries coincide with statutory boundaries, the statutory boundaries should be respected. A surveyor, property owner, or any other

person does not have the authority to amend or redefine boundaries set out by statute.

SI Units - The International System of Units, abbreviated as SI, is the modern form of the metric system. It is to be used exclusively for all survey measurement. Recourse may be needed to Imperial and other measurement units when dealing with historical mapping. When quoting Imperial units from original documents, the measurement should also be given in SI units in brackets, using the conversion factor 1foot = 0.3048m or 1 inch = 2.53 cm rounded to the nearest millimetre.

Title (Root of Title) – The original title deed from which all subsequent title deeds, including existing deeds and deeds of assignment for leases, have been derived, either as part of, or the entirety of, the original deed. The parcels clause and/or Deed Map attached to an original deed is a significant source and frequently decisive when resolving complex or difficult boundary issues on lands that have a common boundary location with the lands described in the original Deed.

Title (Chain of Title) – an unbroken chain of Title Deeds from the Root of Title forward to the present owner.

Title Plan – See definition under the entry for *Boundaries* above.

Title Plan Delineation – See definition under the entry for *Boundaries* above.

Preface

What do landowners require of the National Land Registration Service?

Landowners are the primary stakeholder in property, but there are many other stakeholders that depend on the information captured and managed by the national land registration service, which in Ireland is the Land Registry.

When issues arise close to a property boundary, the natural and obvious place to go to extract information to try to resolve the problem is the Land Registry. Landowners require certainty as to the interests they either have, or do not have, and where exactly those interests are located and where they cease. Landowners regularly request the marking of their boundaries on the ground to clarify ownership issues regarding boundary features, buildings and trees close to their property boundaries. This is not always possible to the degree of accuracy and precision landowners may wish, owing to several factors that the surveyor must consider before proceeding.

What does the National Land Registration Service Provide?

The Land Registry and the Registry of Deeds and the archives they manage contain much of the legal documentation regarding land ownership within the state, both public and private.

If landowners contact the Land Registry to establish the location of their boundaries, they will be informed that “The Land Registry map is an index map and identifies property, not boundaries, so Land Registry are not in a position to advise”.

The spatial component of land registration, in many European states, is based on legal cadastres compiled from accurate boundary surveys of land parcels and therefore these types of landowner’s queries can be answered. However, Ireland does not operate a legal cadastre and the land registration system is based on the English general boundary system and is non-conclusive in nature. It operates on OSI mapping, showing topographic features, not legal parcel boundaries. Therefore, the parcel extents (area) and boundaries are not guaranteed.

As a result, the landowner may need to appoint a specialised boundary surveyor to conduct research to determine the correct boundary locations. In order to do this, the surveyors need to examine three main elements, the legal boundaries, the current physical boundary features on the ground, and the title plan delineations shown on the Land Registry Title Plan, if the

property is registered in the Land Registry.

- a) The legal (Title) boundaries (which identify the intent of the parties) are contained in the deeds and deed maps. These are the primary evidence for a property’s boundaries, so copies of these must be acquired from either the Land Registry or the Registry of Deeds.
- b) The physical boundary features on the ground, if any exists, which define the current physical extent of a property are captured using a GTS (see section 5.3.3) to a defined high accuracy on the national spatial reference framework. These physical boundary features are the secondary evidence for the location of the property boundaries.
- c) Finally, if the property is already registered in Land Registry, then a spatial extraction of the Title Plan should be purchased from Land Registry. Land Registry maps, should be treated with caution (note the OSI/LR joint statement).

The information contained in deeds and deed maps are of such varied quality that special care must be exercised using them. They can be comprised of drawings or architectural sketches which do not use a map projection, old OSI County series maps, sometimes without boundary annotations, sometimes without boundary dimensions, and sometimes even without map scales. Additionally, there is a need to geo-reference them onto the national spatial reference system to overlay them onto the GTS for spatial analysis purposes, so care is needed to ensure the geo-referencing is completed as accurately as possible.

Modern surveying technology now allows for the capture of physical boundary features accurately to within a few centimetres. In many instances there may be multiple physical features, such as hedges and fences, running parallel to one another, close to an assumed boundary location, so it is necessary to capture all of these features. The capture of physical boundary features using GTS provides an invaluable accurate base map on which to clarify issues and conduct the analysis. It is important to note that a topographical survey is not a GTS, and should not be used as a replacement for a GTS.

Finally, the Land Registry Title Plan can be purchased from the Land Registry in digital form (Digital Boundary Product (see Land Registry Mapping Guidelines Appendix 7(c)) on the same national spatial reference framework (ITM15), so title plan delineation can be easily overlaid onto the GTS. However, since the title plan delineations are affected by accuracy issues, clearly set out by

both Ordnance Survey Ireland and Land Registry, these issues must be taken into consideration. Ordnance Survey mapping is of very high quality, but it should be noted that it was designed to serve a wide range of purposes nationally and not specifically for the purpose of land registration. This should be considered when dealing with OSI mapping in a boundary context.

Once these three main elements are superimposed on one another using the national spatial reference framework, an analysis is conducted to determine the best interpretation of the location of the boundary. The result may not be conclusive, but if the analysis is conducted correctly, in a methodical manner, it can supply critical evidence to support the location of the relevant boundary which can be difficult to challenge.

What changes can surveyors make to ensure the National Land Registration Service can respond better to landowners needs?

There are a number of areas where surveyors can make changes in their current practices to significantly enhance the services supplied by the national land registration service and help our colleagues in the future, such as:

- a) Standardisation in the preparation of deed maps: Maps accompanying applications for first registration must comply fully with the requirements set out in the Land Registry mapping guidelines. Deed maps and the legal boundary definitions attached to the deed of transfer, or the deed of rectification, or a deed for defining a new boundary, should also be submitted to Land Registry for clarity. Deed maps should comply with the standards set out in the section on boundary definition survey (BDS – section 5.3.4). They should be prepared at an enlarged scale and with coordinate intersections to show the detail of the current physical boundary features. The inclusion of such elements as dimensions, and boundary descriptions which specify where the boundary lies in relation to the physical boundary features (if explicitly contained in the deeds) are recommended so that copy instruments can supply better quality information to the surveyors in the future.
- b) When new boundaries are being created, they should be surveyed using the BDS methodology outlined in section 5.3.4 to permit the boundary details to be recorded much more precisely by the Land Registry. This is probably the most important change surveyors can make to significantly enhance the information contained within Ireland's land registration system.
- c) Surveyors need to be extra careful of the choice of language used with clients regarding the conclusiveness of any results supplied. We work within the system we have, which is non-conclusive, so the best we can do is provide a result which can be accepted because of the careful methodical approach used which we are capable of defending, in front of a judge if necessary.
- d) Finally, it is normal for landowners to refer to their property's boundary as "their boundary", but in reality, it is a common boundary between two, or more, adjoining landowners. All land is subject to ownership, therefore gaps, or overlaps, should not exist between adjoining properties. It is recommended that surveyors should refer to boundaries as "common boundaries". This is a very subtle but hugely important difference. If landowners perceive the boundary as a "common boundary" it should become generally accepted that either landowner cannot unilaterally change the physical boundary feature without discussing it and agreeing it in advance with the adjoining landowner. Also, since the boundary is a "common boundary" it is totally within the control of both landowners to jointly decide and agree where they want their common boundary to be.

1. Introduction

Some of the matters covered here, and later in the main body of the text, have already been discussed in the preceding preface and many definitions of technical terms have already been included in the glossary. Nevertheless, some of this material is being reiterated to ensure a coherent flow to the logic and reasoning of this guidance note. Any perceived duplication is deliberate.

For the majority of people, their land boundaries are a matter of little conscious concern and, to a great extent, people live in amity with their neighbours. Their awareness of the precise dividing line between their respective properties is based on a mixture of fairly imprecise physical features such as walls, fences and hedges, a range of customs, traditions and presumptions, coupled with a good dose of mutual understanding, tolerance and good neighbourliness. Knowledge of the exact location of their common legal boundary to a property is not normally essential to the use and enjoyment of the property by the respective owners.

Issues can arise however when there is change - a new neighbour, new building work being carried out close to, or on their common boundary, maintenance or replacement of their common boundary features, blocked drains, overhanging trees or hedges, a change of land use or land value, or the insistence by one party on an alleged right, not previously an issue. In addition, a greater awareness of boundaries, through ready access to online digital sources, such as the Land Registry portal www.landdirect.ie or the OSI's website GeoHive, or Google Earth coupled with misinterpretation of these sources and a lack of understanding as to their explicit limitations, may also be a significant contributing factor.

All of these phenomena may lead to a desire, or need, on the part of landowners to know where, exactly, the legal boundary of their property lies and, by extension, an urge to enforce this legal boundary against those whom they would perceive, rightly or wrongly, as trespassers. The chartered surveyor's role concerning the location of legal boundaries, how they can be discovered, clarified, mapped, defined and registered, and how they can be defended in court form the main subject of this guidance note.

Note that the basic definitions of the various boundary types are contained in the glossary earlier in this document.

1.1 Physical Boundary Features

Physical boundaries features come in many different shapes and forms, each with varying characteristics that determine how accurately a location on the physical boundary can be defined. Physical boundaries may have considerable width and may be amorphous or lacking in precision (a hedge, for instance). Even hard features, such as walls or fences, may require substantial detailed definition to ensure that the location of the legal boundary can be identified with clarity, relative to the physical boundary feature and, if this detail is lacking, difficulty may exist in locating that boundary. A number of parallel physical feature may occupy the general location of a property boundary leading to difficulty in deciding which feature defines the actual physical boundary. Physical boundary features may change and degrade over time. They may be moved or demolished and their status, as a component of a legal boundary, may also change due to adverse possession.

Section 43 of the Land and Conveyancing Law Reform Act 2009 provides a broad description of physical boundary features under the heading 'party structures'. It should be noted that the descriptions provided are for the purposes relating to proposed works to boundary proximity features and works orders, as set out in the succeeding sections 44 to 47 of the said Act. The relevant section of the Act is provided in Appendix Q.

1.2 Legal Boundary

A legal boundary has been defined as a plane or surface of zero thickness, where the property rights of one owner abuts against the property rights of another. In realising this theoretical concept on the ground, the following procedure will prove to be reliable and robust:

- a) Define precise and clearly identifiable points of hard detail on the physical boundary feature, where:
 - i. These points represent the legal boundary change points.
 - ii. The legal boundary runs in straight lines between these points.

- b) Where no points of hard detail are identifiable on the line of the legal boundary, physical boundary markers (e.g., rebar, ground anchors, etc.) can be established defining the change points on the legal boundary.

In both cases the plane of the legal boundary will extend vertically upward and downwards from this line and the defined boundary must be formally agreed between the two landowners.

These points, or markers, must be precise in nature and they must be unambiguously described and defined, using text description, sketches and photographs, so that they are discoverable decades later if necessary.

Their location should be further confirmed by one or other of the following methods:

- i. the use of dimensions from permanent “hard” physical features in the landscape, to the change points on the legal boundary.
- ii. by reference to ITM15 coordinate definitions for the change points of the legal boundary.

If multiple forms of definition are used, it is vital that there is no conflict between these different forms of definition, or between those definitions and the reality on the ground.

The dimensions from permanent hard detail, or the points located by ITM coordinates, allow the location of the legal boundary points to be re-established, in the event of the physical boundary, or the boundary markers, being damaged, moved, or demolished.

1.3 The Historical Situation

Historically, there are three common sources where the legal boundaries of a property are defined. However, it is important to note that these definitions are not necessarily free from error, and they should be carefully checked and treated with caution:

- a) A deed of transfer or a deed of conveyance, by which a parcel of land is transferred from one owner to another. These deeds frequently read “assumed shared” in the requisitions on title, and the map attached may or may not have been verified on the ground at the time of transfer.
- b) A boundary definition deed, or agreement, defining a common legal boundary between two landowners.
- c) An Instrument creating a conclusive boundary registered with the Land Registry.

Also historically, two distinct methods have been used within these documents to define a legal boundary:

- i. Firstly, a text description, within the deed or Instrument, known as a parcels clause, describing the physical boundary features of a parcel of land – walls, fences, banks, ditches, hedges, watercourses etc. – possibly with a statement defining the ownership of these physical boundary features. The definition may include specific dimensions, indicating the lengths of the boundaries and where, relative to the physical boundary, the legal boundary is located.
- ii. Secondly, a map, attached to the deed. The deed may state specifically, by a form of words (...more particularly delineated on the plan attached), that, in cases of ambiguity or conflict, this map takes precedence over the parcels clause in defining the boundary. Alternatively, the deed may give precedence to the parcels clause. These maps, historically, may use a largescale Ordnance Survey map as a background (1:2,500 scale, but sometimes larger or smaller), or they may use a hand drawn map at a variety of scales and the legal boundary will be delineated by a thin red line relative to this background. The lengths of the boundary line segments may be dimensioned with written measurements and the map may include described hard detail which anchor the legal boundary map measurements to reasonably permanent physical features on the ground.

Note that the definitions of legal boundaries in deeds, as described above, may not have met the strict criteria set out earlier in this section for accurate legal boundary definition:

- a) A physical boundary description may lack precise definition i.e., no points of hard detail have been defined on the physical boundary.
- b) An amorphous boundary feature such as a hedge may have been specified, which changes location due to growth.
- c) It is also impossible to define a precise legal boundary location, within the thickness of the hedge, other than by reference to the root of the hedge, which will also change with the passage of time.
- d) There may be multiple parallel physical features at the boundary location and the description is ambiguous as to which is the relevant feature.
- e) There may be errors in the dimensions.
- f) There may be conflict between dimensions.
- g) The deed map may not geometrically align with the physical reality currently on the ground.

There are many, many more potential issues, but these are sufficient to give a flavour of the problem. As a result, the legal boundary may be ambiguous and ill-defined and the deed, or deed map, may not provide the precision that would allow landowners to identify the exact location of the legal boundary to their property on the ground. If a surveyor is engaged by the landowner(s), the surveyor must complete a process of research and analysis to come to an opinion regarding the location of the legal boundary. Note, that a surveyor has no power to define a

boundary in these circumstances. The surveyor merely gathers and presents evidence. Definition of the legal boundary requires agreement between the two landowners based on a deed or legal agreement, or a judgement by the courts.

Guidance on the research process required is provided in chapter 4.

Guidance on carrying out a BDS which would provide a secure and reliable definition of a legal boundary for inclusion in a deed of transfer, or a boundary definition deed, is provided in the chapter 5 - *Site Inspection and Boundary Surveys*. Guidance on re-establishment of a legal boundary on the ground, based on an accurate and agreed boundary definition, is also provided in chapter 5.

Care and caution are needed to resolve cases, where a purchaser considers that he has clarity, from the documentation received, as to what was being transferred, but where the actual land to which the legal title applies is not correctly defined in the documentation. Careful checking to ensure that what is being physically transferred on the ground corresponds to what is being transferred within the legal documents is therefore essential.

2. Professional Conduct

2.1 Conflicts of Interest

Surveyors should refer to the RICS professional statement on Conflicts of Interest¹, and should also have regard to the Rules of Conduct on Conflict of Interest as contained in the SCSI Rules of Conduct and the RICS Rules. Surveyors are expected to avoid actual or perceived conflicts of interest when accepting boundary dispute appointments. Surveyors should also consider whether a conflict may arise during the appointment and whether that conflict renders them incapable of performing the role. Once appointed as an expert witness, surveyors perform a specific professional function. They no longer owe sole responsibility to the party that engages them, but also owe duties to both parties to the dispute, and to provide professional insight based on evidence and knowledge to the client and to the court. Surveyors should consider their position in relation to all parties as part of any conflict-checking procedures.

Where a complaint is made, SCSI may ask members to demonstrate that they have considered whether a conflict of interest, or a perception of conflict, has arisen, and what steps they have taken to avoid or manage that conflict.

2.2 Acting with Integrity

Neighbour disputes can be fractious. SCSI expects its members to be honest, straightforward and trustworthy in all that they do. This can relate to both the way they interact with the parties and the way they make decisions pursuant to their appointment. The RICS Global Rules of Conduct² define example behaviours when acting with integrity as:

- Members do not mislead others by their actions or omissions, or by being complicit in the actions or omissions of others.
- Members do not allow themselves to be influenced improperly by others (as a result of, for example, giving or receiving work referrals, gifts, hospitality or payments) or by their own self-interest.
- Members identify actual and potential conflicts of interest throughout a professional assignment and do not provide

advice or services where a conflict of interest or a significant risk of one arises, unless they do so in accordance with the current edition of Conflicts of interest, RICS professional statement.

- Firms have effective processes to identify actual and potential conflicts of interest, to enable appropriate decisions to be made on whether to accept work, and to keep records of decisions made about actual and potential conflicts of interest.
- Members providing advice and opinion in a professional context do so honestly and objectively based on relevant and reliable evidence, and firms have processes to ensure that directors, partners and employees do so.
- Members are open and transparent with clients about their fees and services.
- Members act to prevent others being misled about their professional opinion.
- Members do not take unfair advantage of others.
- Members protect confidential information and only use or disclose it for the purposes for which it was provided, where they have the necessary consent to do so or where required or permitted by law.
- Firms keep client money safe and have appropriate accounting controls.
- Members do not misuse client money and comply with controls intended to keep it safe.
- Members do not facilitate any financial crime including money laundering, tax evasion, bribery or corruption. Firms have effective processes to prevent directors, partners or employees from doing so.

2.3 Competence

In the context of expert boundary surveyors, regulatory complaints can arise from poor professional conduct or from incompetence. Surveyors should ensure that at all stages throughout their appointment, they undertake their work with due care and diligence, having an appropriate level of knowledge, and with proper regard to the technical standards expected of them. The purpose of this guidance note is to assist surveyors in understanding the technical standards expected of them and to underline that surveyors should not take instructions outside of their area of competence, expertise and knowledge.

¹ RICS, 2017, *Conflicts of Interest - Professional Statement*, Royal Institution of Chartered Surveyors, London, pp1-24

² RICS, 2021, *Global Rules of Conduct*, Royal Institution of Chartered Surveyors, London, pp1-11

2.4 Anticipated Role

The role of the surveyor in boundary resolution issues is not always clear to the client or landowner concerned. There may be an expectation that the surveyor will provide an explanation or solution which includes a legal interpretation. This expectation is understandable as the surveyor is required to consult a range of legal documents in carrying out their research. Surveyors should be clear that their role is essentially and primarily concerned with the spatial aspects of boundary issues, the physical attributes of features on the site and how these have been represented and described in various documents including historic and modern maps. The output of the surveyor's involvement is usually a map or plan, likely to be dimensioned and annotated, and possibly with a report. In verbal communication the surveyor should exercise caution and provide advice in the context of their report and map(s). Questions outside the surveyor's area or expertise should be referred to a solicitor or other relevant professionals. This may include a conservation architect or building surveyor in instances where the age of a particular structure needs to be determined.

The role of the surveyor includes briefing and advising other professionals engaged by or on behalf of the client or landowner. The surveyor's advice to a solicitor may be crucial in the event of a claim in relation to adverse possession. In such instances legal

advice is based on factors including the location of boundary fences and the length of time the fences are in situ. The surveyors' observations on the physical attributes of boundary fence details such as, nature and condition of materials used, vegetation growth, evidence of maintenance, estimate of age, in addition to photographic and historical map evidence and local knowledge will assist them in advising the solicitor and their client. The surveyor should not make judgements or definitive statements concerning adverse possession claims irrespective of whether they are in favour or not in favour of the client or landowner's case. The surveyor should therefore confine their advice to the spatial and physical attributes of the boundary, its related documented records, dates/time spans and all relevant information that will inform and assist the solicitor to give legal advice including advice in relation to a potential adverse possession claim.

Surveyors are also expected to be compliant with relevant SCSi Guidance Notes (such as this one) and relevant best practice procedures, such as Guidelines for using GNSS equipment.³

³ RICS, 2010, *Guidelines for the use of GNSS in land surveying and mapping - Practice Standards*, Royal Institution of Chartered Surveyors, London, pp1-82

3. Setting up the Project

This phase covers the various steps that occur from initial contact to confirmation of instructions. It is essentially a dialogue between the surveyor and the client and/or their adviser (for litigious cases the adviser is usually the Client's solicitor). During the dialogue, the surveyor:

- identifies the key issues and requirements,
- considers any due diligence issues and potential professional conflicts of interest,
- ascertains which issues are within their competence and that they can help with, and gives clear guidance as to what can and can't be done and,
- gives some idea of the cost and the basis of charging and anticipated timescale for carrying out the proposed work.

3.1 Initial Contact

It is important that records are kept of these initial contacts just in case something goes amiss later. The initial contact may arise in any of a number of ways:

- Direct contact by a member of the public** - This initial contact needs to be handled carefully because the potential client may have little knowledge of what an surveyor does, and the limitations of their role, though company websites assist in specifying the services on offer. They may have unrealistic expectations and may assume that the surveyor can provide a complete and definitive solution to the boundary problem. The surveyor should emphasise that they can only deal with the spatial aspects of the dispute and that for definitive legal advice a client will need to consult a solicitor. The difference between acting as a surveyor/consultant or as an expert witness should also be emphasised if appropriate at this stage in order to avoid any possible misunderstandings later.
- Professional Advisors** - This can include solicitors, architects, planners, consulting engineers and other surveyors. They (especially solicitors) should have a greater awareness of what the instructed surveyor can and cannot do, but there will still have to be a process of defining the precise issues to be addressed. Surveyors should ask for a clear letter of instruction or set out their understanding of the service(s) they will provide in conditions of engagement to avoid any misunderstandings.
- Direction of a court** - Where litigation is already in process, the Judge may make an Order that a particular expert (agreed between the legal representatives) should be instructed to do specific work. In this scenario, the actual contact (instructions) will usually come from the legal representatives, normally the solicitors for both parties, or from the Court judge. In this case, the surveyor is acting as an independent expert (see section 9.4). The surveyor should be clear as to where their fee should be directed to avoid misunderstanding or later dispute.

3.2 Services Available

A range of services is available:

- Supply of maps for first registration** – Two types of surveys are available
 - For normal land parcels on the terrain surface a map is produced showing the current physical extent of the parcel on the ground and its legal extent as defined by the deed and deed map(s) for the property. This map must comply with Land Registry Mapping Guidelines Appendix 1.
 - For all multi-unit developments, application maps must comply with Land Registry Mapping Guidelines Appendices 5(a), 5(b) and 5(c).
- Supply of maps for Boundary rectifications** – Either a BDS (section 5.3.3) or a BVS (section 5.3.2) would be required to clarify the current situation of the boundaries, to permit an agreement between adjoining landowners to allow the Title Plan delineations be rectified in accordance with the agreement reached. If the rectified boundary is to be registered as a non-conclusive boundary then a BVS will suffice in most situations, but if the rectified boundary is to be entered by agreement under Land Registry Rule 141, (Appendix O) then a BDS is advised. Maps from these surveys must comply with Land Registry Mapping Guidelines Appendix 1.
- BVS (section 5.3.2)** – This type of survey is normally carried out for a new purchaser of a property to confirm that the land being conveyed on the ground corresponds to the property being conveyed within the legal documents.
- Boundary identification and demarcation** – two types of surveys are available:
 - If the existing boundary is currently registered as a non-conclusive boundary, then a GTS is necessary for analysis to determine correct location of boundary

from supporting evidence, before it is marked on the ground.

- If the existing boundary was already surveyed using a BDS (section 5.3.4) and the detailed boundary descriptions recorded within Land Registry either as a non-conclusive or a conclusive boundary, then it will be possible to mark the boundary on the ground precisely with confidence using a BRS (section 5.3.5).
- e) Dispute Resolution** – It is recommended that a GTS is necessary to spatially collate all the evidence identified during the research phase to accurately clarify all the issues identified and propose best solutions to resolve the dispute.
- f) BDS (section 5.3.4)** – This survey type is used to capture the nature and location of new boundaries. The new boundary is described and defined in a specific way to allow it to be entered into the mapping register by agreement under Land Registry Rule 141 if required.
- g) BRS (section 5.3.5)** – the survey type is only used when a boundary has been previously captured using a BDS and entered into the Land Registry mapping register using rule 141. Accurate information is recorded in the register which allows the boundary to be subsequently re-established on the ground precisely.
- h) Declarations of Identity** – where the surveyor makes a sworn declaration regarding the accuracy of the boundaries, access from the public road, and, in some instances, the services used by the property. A template is provided as recommended best practice in Appendix G.

3.3 Identifying the Project Requirements

The surveyor should identify the Client's requirements and, if necessary, check with the client's solicitor if the case is likely to proceed to litigation. In some cases, it might be necessary to meet the client on site to discuss the issues and how they might best be resolved.

The expert surveyor should be confident that the requirements fall within their professional knowledge and competence; that they have the correct training and experience for the task; and have adequate professional indemnity insurance (PII).

Commonly, in boundary cases a great deal of information is given, much of which is not relevant to the surveyor: general problems with the neighbour, harassment, damage, planning, amenity, lifestyle, etc. The surveyor needs to establish the

issues that they can help with (essentially plans, maps and photos, evidence of factors that are visible on the ground, and measurement). The surveyor should identify the evidence relevant to these issues and may offer advice on who to turn to on non-survey issues.

3.4 The Contract

At the end of the setting-up phase, the client should be clear what the surveyor is going to do, what form the final settlement may take (a boundary agreement for example), the form of the results, the likely costs or basis of fee charging and the likely timescale for producing the work. The client should also be aware of what the surveyor will not do, and the fact that – since the surveyor is impartial – the surveyor's conclusions may be different from their own.

The client, or their professional adviser should send confirmation of instructions that will formally set out what the surveyor is to do and will normally include a list of the evidence being supplied for the task. In some cases, a copy of the letter of instruction may be included in the surveyor's final report.

It is important that a comprehensive record of each item of expenditure is kept, from initial contact through to the conclusion of the case. A statement of account should be made at the end of each month. SCSi recommends that a regular statement of account be submitted to the instructing party (or parties). It is also vital to have time sheets, including a detailed activity list for each hour spent, and a record of material and travelling costs available for production if necessary. For example, should the case proceed to court hearings but then be settled out of court prior to the hearing, you may well be expected to produce detailed, justifiable and reasonable costings immediately.

4. Research

Research, in the context of boundary clarification, is a broad term covering the discovery and analysis of information that may be relevant to identifying the nature and location of legal boundaries, physical boundaries and easements. In theory, if the boundary locations of a property and those of an adjoining property are clearly and unambiguously defined in the deed(s) and deed map(s) of the respective properties and there is no conflict between these definitions and they relate clearly to identifiable physical boundary features on the ground and again there is no conflict in terms of dimensions or otherwise between the deed definitions and the physical boundaries, then there should be no need for further research. Unfortunately, this is rarely the case and the issue of adverse possession may further complicate matters. The key point to note is that research of this nature takes place in the context of boundary clarification. If there is no dispute between adjoining landowners then there is usually no need for boundary clarification research.

When carrying out research relating to property registered in Land Registry it is imperative that practitioners read the Title Plan in conjunction with the Folio.

It is not proposed to outline in detail the processes involved in analysing the relevant data sources. It is assumed that a competent surveyor is familiar with these processes. In broad terms the analysis will consist of bringing all of the relevant mapping to a common spatial reference framework and overlaying this mapping digitally against a GTS, to discover both coincidence and discrepancies between the various maps and the physical reality represented by the GTS. Each potential source in the investigation should be listed and details of where it can be accessed provided. The degree of confidence and relevance that can be assigned to each source should also be outlined (Appendix C).

While it is unnecessary to research sources that may not appear relevant or useful in relation to the majority of apparently routine or non-contentious boundary surveys, surveyors should be aware that maps produced from their surveys, and their own expertise and evidence as expert witnesses, may be called upon at a future date for boundary issues unrelated to the purpose of their survey, therefore the purpose and intended use of the map should be clearly stated on all mapping produced. Other sources, including relatively obscure sources, may be used by the opposing side in litigation and found to be supportive or their case. For this reason, surveyors should be mindful of the need to consider a number of sources when interpreting the location of boundaries. It is a matter of judgement for each surveyor to

determine the extent of their research and the nature of sources they should consult for each survey and mapping project. It may be advisable for surveyors to include a short report with each survey or mapping output in which they state their brief, the sources researched, and the limitations or relevance of sources considered. Such a report may help to demonstrate their competence when undergoing cross examination (Appendix C).

Some or all of the following data sources may form part of the research process.

4.1 Ground Truth Surveys

The first step in the process of boundary clarification is the creation of a GTS (section 5.3.3). Without this essential base there is no means of verifying the spatial accuracy or the spatial integrity of any other documents or maps.

4.2 Land Registry & Registry of Deeds

Although the Land Registry mapping is not conclusive with regard to boundaries, it should nonetheless be obtained and analysed against the GTS. Copies of a Special Registration Map, Title Plan, or Official Map Search can be obtained for a fee from www.landdirect.ie. An image of a current Land Direct view may be sufficient for an initial investigation. Best results are achieved by purchasing a Land Registry Digital Boundary Product (see Land Registry Mapping Guideline Appendix 7(c) and overlaying it on the GTS.

The Registry of Deeds contains memorials of land transactions (Deeds) from the first decade of the eighteenth century onwards. Searches in this archive may produce useful material in boundary location research. The Townland Index can be searched for memorials from 1709 to 1946. The Names index can be searched from 1709 onwards. The Registry of Deeds Memorials were replaced by the Registry of Deeds Application Forms in 2008. The Application Forms contain essentially the same information as the Memorials. Registry of Deeds records do not contain maps but the records may contain descriptions of property which could be useful in identifying boundaries.

It is essential to obtain flat, scanned, colour certified copies of the deeds and deed maps together with a brief statement from the client's solicitor outlining the composition and history for the client's property. It is also desirable to obtain the matching

documents for the adjoining property and the cooperation of the adjoining owner and his solicitor will be required in achieving this (though this is rarely achieved). If it is registered property, access to the Instrument that created the initial registration for the land will be needed. This also requires the cooperation of the adjoining owner and their legal advisor in relation to the adjoining property. Comparison of these documents with the GTS may resolve the issue, if not the process of research should continue.

Inspection of the Deed of Conveyance for the original (or Root of Title) may be necessary if the boundary of the land title it determines has a common boundary with a boundary described in the subject deed or its deed map, that is in dispute, is contentious or ambiguous. The boundary as described in the original title Deed, or Root of Title, may provide evidence that enables the correct alignment of a boundary to be verified, defined and/or a resolution to a boundary dispute to be achieved. The original, or root title, may comprise a much larger area of lands of which the subject title is a part.

4.3 Ordnance Survey Ireland (OSI)

OSI mapping indicates topographic detail and does not show land title boundaries. Both OSI maps and the Land Registry Title Plan delineations, which are directly overlaid on the OSI map topographic features, are subject to limitations of use with regard to accuracy, because of survey methodology, production methods, and the published scale. See the OSI accuracy statements in Appendix D and also the joint statement of the OSI and Land Registry in Appendix H. Any errors in OSI mapping brought to light as a result of GTS comparison, which exceed what could reasonably be attributed to the limitations of scale and survey methods, should be notified to OSI for investigation and amendment using the Data Quality form supplied in Appendix L.

An OSI Land Registry compliant base map may be purchased from the OSI website which can be scanned and geo-referenced to overlay the GTS on the OSI detail. However, scanning of Land Registry Compliant Maps is not permitted under the OSI terms of use, and the geo-referencing process is not as accurate as required (errors around 0.5m are not uncommon) so the OSI has been contacted to request it to consider offering a Land Registry Compliant Map as a GeoTiff to overcome these two issues.

Historical OSI mapping may also be useful in clarifying boundary issues. The following maps are available on the OSI GeoHive website:

- a) Historical 25 Inch map 1888 – 1913
- b) Historical 6 Inch map B&W 1837-1842
- c) Historical 6 Inch map colour 1837-1842
- d) Six Inch Cassini County Series 1890-1918

The following aerial photography is also available on GeoHive:

- a) Aerial Premium
- b) Aerial 2005-2012
- c) Aerial 2005
- d) Aerial 2000
- e) Aerial 1995
- f) Digital Globe

GeoHive also contains a very wide range of data in the areas of environment, conservation and heritage, in map form, which may be useful in the context of boundary location research. Take note of any copyright issues that might arise in relation to any of this additional mapping.

4.4 Historical Topographical Surveys

Previous or historical topographical surveys of the subject lands, or of adjoining lands that have common boundaries with the subject lands, are an important source of information and evidence to surveyors, especially if they have been produced by competent surveyors. Dated historical surveys assist surveyors to determine the length of time physical boundaries, and other relevant features, have been in specific locations. It is important to note that topographic surveys are not GTS of property boundaries and the information contained within may be limited.

4.5 Satellite Imagery and Aerial Photography

Google Earth or similar sources of satellite imagery are available on-line, some with sufficiently high resolution imagery to be useful for research of property boundaries. There are also many companies providing services to provide very high quality low flown imagery using drones.

4.6 Court Judgements

Court Judgements are relevant to the work of surveyors if they contain a determination affecting the extent of a title in lands. A judgement may determine a title boundary to be at a particular location and that a physical boundary be constructed or placed accordingly. It may also determine the nature of the physical boundary to be constructed. A subsequent topographical survey should be compared with a court judgement to ascertain if the judgement has been complied with. As part of the survey, surveyors may be able to indicate, by notes on the survey map, the nature of the physical boundary, e.g., whether a 2-metre high, 22.5-centimetre wide concrete block wall or a 2.3 metre high steel palisade fence, etc. has been constructed and include these and other descriptive details in a report. If a court judgement states that a boundary wall is to be constructed to a height of, say, 1.6 metres and the surveyor who carries out the survey of the completed wall to verify compliance with the Court

Judgement, finds that the height of the wall varies between 1.5 and 1.7 metres, the surveyor should state on his/her map and/or report the precise measurements, in relation to the specific sections of the wall, as determined by the survey. He/she should also retain dated photographs, on the date of the survey, of the ground surface conditions immediately adjacent to the wall, as these may be altered by lowering or raising subsequent to the date of the survey thereby altering the height of the wall and possibly casting doubt on the accuracy of the survey in a contentious situation at subsequent date. If feasible, it is prudent the measure both sides of the wall.

However, surveyors should not comment on details outside their area of competence, such as the load bearing capacity of a wall or its structural stability, or whether or not a wall, fence or other feature is adequate for security purposes. In his/her report the surveyor should initially outline his/her brief including its purpose, comment on the methodology used, set out the findings including a short comparison with the dimensions stated in the Court Judgement. The surveyor should state the relevant factors that his/her survey does not include, such as suitability of wall or fence for other purposes.

It is advisable to get legal advice to interpret Court Judgements.

4.7 Other Research Sources

4.7.1 TCD Map Library

For other historical mapping the Glucksman Map Library in Trinity College Dublin has a substantial range of maps which may be consulted, where maps held by the library are not accessible from other sources.

Website: <https://www.tcd.ie/library/map-library/>

Email: map.library@tcd.ie

4.7.2 Valuation Office

Valuation Office mapping may be useful. This dates from the original Griffith Survey in the 1840s onwards. The Valuation Office Maps should be checked against the corresponding Valuation Certificates.

4.7.3 National Archives

The National Archive, in Bishop Street, Dublin 2 contains much useful material relating to mapping and property, including first edition manuscript six-inch maps. It also holds the survey

notebooks of the townland survey carried out during the 1830s and early 1840's.

Where legal boundaries coincide with townland boundaries it is normal that the townland boundary description will also apply to the land title boundary as the townland boundary is a statutory administrative boundary, defined in law. The townland boundaries are annotated on the 25 inch maps in counties Kerry, Clare, Galway, Mayo, Roscommon, Westmeath and Longford using the annotations listed in Appendix N. The townland books in the National Archives have to be consulted for these townland boundary descriptions for all other counties.

Annotations on townland boundaries on the Ordnance Survey maps can be very useful to identify the physical boundary feature and where the boundary lies in relation to it.

4.7.4 Local Authority Planning Records

If applications have been made to the Planning Authority, the drawings and maps in these applications may have relevance to the boundary being investigated. Local Authority data regarding taking in charge, utilities, compulsory purchase, etc. should also be investigated if relevant. A red line on a planning application showing ownership, or a blue line indicating lands under the control of the applicant, must not be strictly applied unless verified, as they were prepared for the purpose of advancing a planning application, and may or not have been checked against the actual title to confirm same.

4.7.5 Land Commission

The records of the former Land Commission, which are now under the control of the Department of Agriculture, Food and the Marine, are in storage in Portlaoise. The records are either not available to the public or access is significantly restricted.

4.7.6 Building Surveys and Architectural Plans

Buildings surveys and architects' plans do not generally purport to show land title boundaries. However, such surveys or plans may indicate dimensions to physical boundary features that no longer exist. These may be useful to surveyors in establishing the history of a boundary. All dimensions obtained from such sources should be corroborated with other information if possible. Details indicating physical boundary features, shown on historical buildings surveys and architects plans, without dimensions, should not be used as they may be indicative only. It is also important to establish if the particular plans were for

master planning, design, detailed design, construction, or other use, as each may have their own limitations.

4.7.7 Estate Records and Estate Maps

Estate records, also referred to as landed estate records, and estate maps may be a significant source information for surveyors. In instances where it is necessary for surveyors to seek the original title in order to verify a current title boundary, estate maps will provide this information provided they have a common boundary with part or all of the subject lands and provided they are attached to the estate Title Deed or can be verified as the estate map and provided that they can be located. The boundaries of estate maps are more likely to be useful if the boundary of the current title boundary in question coincides with a townland boundary as estate map boundaries frequently coincided with townland boundaries. If the estate map boundaries are unclear in their definition but appear to approximate or coincide with a townland boundary it is highly likely that they were intended to follow the line of the townland boundary. Other estate records should be consulted to verify if references to townland name(s) support the coincidence of the estate map boundary and townland boundary.

It should be noted that many earlier estate maps were prepared by practitioners who either did not have access to Ordnance Survey maps or did not use Ordnance Survey maps. Therefore, estate maps may need to be examined in conjunction with contemporary, or early editions of Ordnance Survey maps, in order to assess orientation and accuracy.

4.7.8 Maps used in Connection with Department of Agriculture, Food and the Marine

Maps used in connection with schemes and services which come under the remit of the Department of Agriculture, Food and the Marine, may be of some assistance in identifying the extent of unregistered titles. These schemes include the REPS and AEOS Schemes and various Forestry Schemes. The maps, which are used in connection with these schemes are generally based on Ordnance Survey maps. They are not ownership title maps. They are used to indicate the area over which the landowner applies to be included in a Department scheme. However, in instances where the title to a property is unregistered and where deed maps are unavailable or inadequate, these scheme maps may be of limited assistance when used in conjunction with evidence from other sources to enable the extent of land titles to be determined.

If the landowner can produce evidence, including corresponding maps, that he/she has been in a particular scheme for several years, this may be in his/her favour. If a claim for adverse

possession arises, such a claim would be a matter for legal advice and, in the event of such a claim, these maps may be used as evidence of occupation and use. Surveyors who use such a scheme map to corroborate other spatial information, should state its limitations in an attached report. If the surveyor's research includes a site visit to verify details, a note in relation to the apparent use of the lands and the nature of its boundaries, on the date of his/her inspection, or inspections, should be included on the surveyor's report.

Compatibility between the boundaries indicated on such a scheme map and the boundaries of deed maps of adjoining properties or with Land Registry maps for adjoining registered properties, is not conclusive evidence that the boundaries of the scheme map represent the title boundaries of the subject lands.

4.7.9 Family Records

Family photograph albums may be useful in providing pictorial evidence that physical boundary features, contained in the background to such photos, existed at particular points in time. Aerial photographs taken from low flying aircraft, popular in the 1980s, are also useful in providing historic evidence for boundary positions.

4.7.10 Interviews and Conversations with Landowners and Others

Interviews and conversations with landowners and others who have background knowledge may provide significant information in relation to a boundary issue that is not possible to deduce from topographical surveys or documented historical information. Conversations may arise in a casual way through meeting on site or may be more formal by arrangement. Information obtained should be recorded by the surveyor at the time of the conversations or meetings, or immediately afterwards. If the surveyor is accompanied by a colleague or other witness to the conversation or meeting, that colleague or witness should independently record and retain on file the details of the conversation or meeting. It should be noted that the information received during such a conversation is likely to be subjective and, because of the nature of the boundary issue, may be biased in favour of one or other of the parties concerned. Depending on the nature of such information, its value may be that it alerts the surveyor to possible circumstances that need to be investigated. Surveyors should not be unduly influenced by the information obtained. If possible, information obtained should be independently corroborated.

5. Site Inspection and Boundary Surveys

Surveys are based on measurements which should relate back to a particular standard. The SI system is what all [consistent and robust] measurement is predicated on and indeed legally required to follow. Legal metrology is one of the pillars of the single market for goods. There are seven universal constants: - time (s), length (m), amount of a substance (mole), electric current (A), temperature (K), luminous intensity (cd) and mass (kg). These are all covered by Directive 80/181/EEC on the adoption of EU countries' laws relating to units of measurement. These EU Directives were adopted in Ireland under Statutory Instrument No 154 of 2020.⁴

5.1 Site Inspection and Identifying the Boundaries

Following the research detailed in the previous chapter, the surveyor should have a knowledge of the main issues and requirements before attending the site to inspect the boundaries and complete the required boundary survey. It may be advisable to complete a reconnaissance of the property with the landowner and have them indicate the assumed physical boundaries to the surveyor. As a boundary is shared in common with the adjoining properties, it is best practice to have the owner of the adjoining properties present at this time also so there can be no confusion as to where the physical boundary between properties is located and to clarify responsibility for same. As noted later in this chapter, it is sometimes required to accurately survey features outside the curtilage of the property. Such features should be identified in advance of the site inspection, where possible, and permission to access these features should be sought from the relevant landowner. Any notes, photographs or other relevant information should be recorded as part of the survey.

If the landowner is not available to perform this task then the surveyor should confirm their assumptions with the landowner later. The deed(s) and deed map(s) should also be consulted in the research phase to extract any descriptions of the physical boundary features contained therein if available.

5.2 Physical Boundary Features

Physical boundary features provide extrinsic evidence which may help to fix the location of a legal boundary in cases where

there is ambiguity that the deed or deed map cannot clarify. The nature of the construction and the construction materials should be examined, together with the apparent age of each feature and the sequence in which features may have been constructed. Evidence of disturbance or movement should also be checked, if necessary. Acceptance and use of boundary features by adjoining landowners over time may also be relevant. Recourse may be had to Common Law boundary presumptions where more cogent evidence is not available, but note that these presumptions are all subject to rebuttal. A clear explanation of these presumptions is provided on the Land Registry for England and Wales website below and although this publication refers to English law and practice the explanations are generally relevant for Irish circumstances also:

<https://www.landregistry-titledeeds.co.uk/frequently-asked-questions/information/boundary-presumptions.asp>

5.3 Boundary Surveys

Boundary surveys can be divided into six distinct types to cater for a range of different scenarios and needs.

Each survey type will have its own specific accuracy requirements, its own level of detail content and its own outputs. Each of these survey types will be discussed individually. It might be useful to note that GTS (section 5.3.3) and BCS (section 5.3.1) are appropriate where some level of dispute between landowners, or lack of clarity, regarding the location of a legal boundary is concerned, while BDS (section 5.3.4) and BVS (section 5.3.2) often apply to circumstances where there is no dispute or disagreement.

5.3.1 Boundary Check Survey (BCS)

There are situations where the resolution of boundary issues does not require the use of sophisticated instrumentation and methods and may be amenable to more basic and common-sense approaches. This may particularly be the case in urban and suburban areas where small residential parcels with long-standing physical boundary predominate, or on small plots of land that have clear, long established and unaltered, boundaries such as roads, water courses, etc. Depending on circumstances and surveying specialism, the surveyor may fo-

⁴ DoBE&I (Department of Business, Enterprise, and Innovation), 2020, European Communities (Units of Measurement) (Amendment) Regulations 2020, number 154 of 2020, Stationary Office, Dublin, pp 1-6

cus on boundary treatments and general condition of physical boundaries in addition to an overview comparison of the actual physical boundaries relative to their position, as depicted on the relevant Land Registry Title Plan Delineations or Title Deed, if available. The approach adopted by a surveyor in dealing with these issues has been termed BCS for the purposes of this guidance note. This type of survey is appropriate where there may be no dispute but the purchaser wants a general overview of the settled boundaries to a land parcel. This type of survey can also form part of general pre-purchase due diligence inspections, or be the starting point where a disagreement with regard to a boundary has developed.

The disagreements in these areas can be divided into two categories:

- A** Disputes which involve the physical boundary feature – its location, construction and status together with human interactions with that physical boundary feature.
- B** Disputes which involve perceived discrepancies between the settled physical boundary feature and its mapped location. The mapping involved usually includes Deed Maps, Land Registry Title Plan Delineations and large-scale Ordnance Survey maps.

Category A - Under this heading, some of the issues most likely to be encountered are:

- Newly constructed eaves or gutters overhanging an existing boundary feature.
- Rainwater discharging into adjoining properties (easement may resolve).
- An adjoining property owner using the entire, or partial, width of a boundary wall as a support for a new structure.
- Altering a boundary wall by increasing or decreasing its height.
- Partially or fully demolishing or rebuilding a boundary feature.
- Tree roots damaging a boundary feature or an adjoining property.
- Trees or hedges overhang into adjoining property.
- Excavations or foundations that undermine a boundary feature.
- Access to both sides of a boundary feature for maintenance purposes.
- Disputes regarding the ownership of a boundary feature i.e., party structure or not.
- Drain blockages, access to drains and associated wayleaves.
- Access or easements, including rights of way and wayleaves to properties.
- Overlooking and rights to light.

This list is not exhaustive and it should be acknowledged at the outset that some of these matters are legal rather than spatial issues and should be dealt with primarily by the Client's legal advisor and not by the surveyor, although if they are being dealt with legally, a good survey plan will assist all parties in identifying and clarifying the issues, and should be advised. Some may require the cooperation of both surveyor and solicitor and there are indeed some that are purely surveying issues, or situations where the legal realities are clear enough to be dealt with by the surveyor.

Dealing with most of these issues may require no more than visual inspection and expert assessment to come to an understanding of the problem. Depending on the nature of such problems, resolution may just involve diplomacy to bring a client to acceptance that they are not fully informed and have no real cause for grievance, or mediation and negotiation to allow the client and his neighbour to come to an amicable agreement. Unfortunately, where agreement cannot be found, or the dispute has become personally embittered and entrenched, the matter may proceed to a boundary dispute. In most cases, as the spatial content of the contention in this category is slight, the dispute may involve purely legal action. In a minority of cases where there are spatial issues, a surveyor's expertise may be required and this may involve GTS, research, comprehensive reporting and formal mediation or litigation.

Category B - In the case of the second category, where the issue involves discrepancies between map delineation and the reality on the ground, the survey process may be a little more complicated.

It should be noted, that detail cannot be extrapolated from deed maps to determine the exact location of a boundary to a higher order of accuracy than the accuracy and precision of the base map used for the deed map.

In the first instance, visual comparison of the map, or maps, at issue, with the physical boundary features should be carried out to identify any apparent anomalies. Scaling boundary features on the map, or taking written dimensions from the map, and comparing them to taped measurements of the corresponding features on the ground should be carried out. Measurement of diagonals between opposite corners to check the accuracy of the geometric shape of the parcel should also be included in the investigation, but may not be possible. If more than one map type is involved, checking the delineated features on these maps against each other by overlay would be useful. Depending on the outcome of these investigations a number of options may present themselves:

- a) This check survey may be sufficient to demonstrate that there are no tangible discrepancies between the mapped and physical boundaries and the client may be reassured on this basis. An explanation of the concept of non-conclusive boundaries and the accuracy standard of OSI mapping, coupled with the fact that OSI mapping shows topographical boundaries and not legal boundaries, may form part of this explanation (see the joint OSI/Land Registry statement in Appendix H, and accuracy of large scale OSI mapping in Appendix D).
- b) If the investigation and check survey reveal substantial discrepancies in Ordnance Survey map detail, the matter should be reported to OSI for rectification using the form supplied in Appendix L. Revision of the Ordnance Survey map will ultimately feed into the Land Registry Title File Plan Delineations which may be amended subsequently.
- c) If the investigation and check survey reveal substantial discrepancies in the Land Registry Title Plan Delineations, which are not remediable by correction to the Ordnance Survey map, then a Deed of Rectification may be required to correct the error. This will require producing appropriate mapping on the surveyor's part and coordination with the client's solicitor. It will also involve gaining the consent of the adjoining property owner to the boundary rectification.

If these three approaches don't resolve the problem and the matter is more deep-seated, then the resolution may involve progressing to completing a GTS, carrying out the research and analysis, engaging in formal mediation and, in a worst-case scenario becoming engaged in litigation.

5.3.2 Boundary Verification Survey (BVS)

The purpose of a BVS, as the name implies, is to verify that the parcel delineations shown on Land Registry mapping, the topographic boundaries on Ordnance Survey mapping and the legal boundary lines delineated on deed maps, or described in parcels clauses, coincide with each other, within the levels of accuracy inherent in that mapping. It should also verify, in turn, that there are no anomalies between this mapping and the apparent physical boundaries features on the ground, again within the accuracy standards of the maps involved.

The validation of the various maps with reference to each other can be carried out by overlay, either by tracing or by scanning and digital overlay. Visual inspection of the overlays should be sufficient to reveal any inaccuracies or anomalies between the mapping. With regard to validating the mapping relative to the physical boundary features on the ground, the requirement is to verify that lines of the mapped boundaries conform to the locations, in the real world, represented by the map delineations.

Surveying of detail beyond that which is shown on the maps in relation to the relevant boundaries is surplus to requirement.

In small open sites, a map constructed by dimensions taken by tape and visual inspection on site may be sufficient to verify the mapping (see section 5.3.1 on BCS). On larger or more complex sites, recourse to survey instrumentation may be required. As verification of the mapping is only required within the accuracy standards of the mapping being verified, it is unnecessary to achieve the level of accuracy required for GTS or BDS. The OSI accuracy statements for their large scale mapping in Appendix D shows accuracy levels for mapping at 1:5,000, 1:2,500 and 1:1,000 scale, the scales likely to be encountered in verification surveys. It is not usually necessary to link the measurement to the national spatial reference framework (ITM15), but it might be easier to do so if using precise GPS equipment.

The verification survey should be plotted at the scale of the maps that it verifies if presented in map form rather than in report form. It should be attached to certified copies of these maps and the complete series of maps should be numbered, signed and dated. The boundaries as delineated on the maps being verified may also be drawn, using different colours or symbology, as overlay on a copy or the boundary verification maps for ease of comparison. If the results are presented in report form, then it may be useful to categorise any discrepancies as either 'acceptable' or "needing attention"; list the nature of physical boundary features found; provide photographic evidence of any major issues identified and make recommendations on how best these issues might be resolved.

As part of a verification survey the surveyor should compare the land areas stated in Deed(s), or on Deed Map(s), the Land Registry Title Plan Delineations, the Ordnance Survey mapping, the verification points surveyed and bring to notice any anomalies that may be apparent. The settled boundaries of the property should be walked, preferably in the company of the client and a description of the physical boundary features should be compiled, ideally including photographs. Access to the property from the public road in terms of contiguity, or rights of way should be looked at and commented on, though it should be noted that the measurement or definition of such access, or other easements such as wayleaves, falls outside the remit of a verification survey. It is good practice, however, to bring such matters to notice where they are apparent and may impinge on the use of the property.

A special case should be noted where a property boundary coincides with a townland boundary mapped by OSI. Townland boundaries are statutory boundaries and the nature of the physical feature defining that boundary and the relationship of the townland boundary to that feature are indicated on the OSI map by a dotted line symbol and an abbreviation, e.g., *CF* – Centre of fence or *CH* – Centre of hedge, etc. A list of these

descriptors is provided in Appendix N. It is considered, that where a property boundary falls along the line of a townland boundary it will probably coincide with that boundary and the line and description shown on the OSI map should take precedence over other evidence, unless explicit evidence, which states otherwise, is available from the deed or deed map.

A verification survey is appropriate where a surveyor is making a declaration of identity and requires assurance that the subject matter of the declaration, in terms of maps and other spatial issues, is accurate. A verification survey is also appropriate where a landowner or a potential purchaser requires assurance that the boundaries of a land parcel are generally accurate and the no anomalies exist in, or between, the relevant mapping. A verification survey may also be used where the property is large and extensive and the cost involved in carrying out a survey to a higher level of accuracy, such as a GTS, would be prohibitive. It is important in the latter case, that the client is made fully aware of the limitations of this type of survey in terms of accuracy, detail and coverage.

5.3.3 Ground Truth Survey (GTS)

A GTS deals with the existing physical reality on the ground, as observed at the time of survey, in the context of a particular property and its settled boundaries. It records, in detail and with accuracy, what is physically present, in terms of settled physical boundary features, concerning a particular land parcel. It provides an accurate and trustworthy base to which evidence of legal title, or other, boundary information can be related so that it can be either validated or questioned.

Physical features to be measured - Land parcel boundaries are the specific subject of a GTS, therefore physical detail, relevant to the settled boundaries at issue, should be measured. It should be noted that only a segment of the boundary to a parcel may be involved and not necessarily the entire boundary. The features to be measured would include all physical features at, or near, the assumed legal boundary, such as walls, fences, hedges, ditches, trees, kerbs, water features, posts, piers, buildings, hard surfaces, or any other relevant structures. As the GTS will be used for the validation of other mapping, additional features in proximity to the boundary, which may be of relevance, should also be measured. These include hard detail such as building corners, electricity pylons, or other built or natural features from which measurements may have been taken in establishing the boundary. Other features, where they can be identified, which are shown on OSI or Land Registry Mapping, or on relevant deed maps, particularly changes in direction of purported boundary lines delineated on these maps, should be included to provide guides for orientating this mapping relative to the GTS. It would also be wise to include older OSI or deed features that are external to the parcel in question as it might be necessary, at

some stage, to orientate other maps such as deed maps relating to adjoining properties to the GTS. There is no need to measure features that are irrelevant to the boundaries.

Accuracy of measurement - The accuracy requirement depends on the nature of the detail being surveyed and the uses to which the survey will be put.

- Hard detail, such as masonry, can be measured, because of its nature, to a higher level of accuracy than soft detail such as a hedge or natural water feature. This has implications for the degree of precision that should be incorporated in the measurement process for different physical boundary features.
- The survey usually comprises two elements – control survey and detail survey – and different standards of accuracy applies to each element.
- Survey instrumentation and methodology have varying levels of achievable accuracy associated with different systems.
- The national spatial reference framework and the satellite systems on which it depends have their own inbuilt level of imprecision and long-term change.

It is essential that surveyors compute the degradation of accuracy through each of these systems and processes: control, detail measurement, computation, adjustment and cartographic presentation, and provide an accuracy statement against the coordinate location of features measured, recorded and presented on their maps.

Instrumentation and methodology used - Instrumentation and methodology are constantly changing due to advances in technology and its cost viability related to boundary surveying. There is every likelihood that they will continue to develop and change over the coming years, therefore no attempt will be made to outline detailed procedures. It is assumed that surveyors are professionally competent in this regard and will keep fully abreast of the appropriate technology to deploy in any given scenario. What is critical however, is that regardless of the methodology used, the required accuracy standards must be met. How these accuracies are achieved should be fully demonstrated and documented with each survey.

The national spatial reference framework used - Current OSI large scale mapping is based on GNSS compatible Irish Transverse Mercator (ITM15) coordinates related to the ETRF89 European Deodetic Reference system. Land Registry bases its parcel mapping on this OSI large scale map base and it requires mapping submitted to them to be based on ITM15 coordinates. Therefore, all GTS should be based on the ITM15 spatial reference framework.

Cartographic presentation of GTS data - It should be noted that the normal output of a GTS is a graphical map. Although feature locations are captured, computed and stored in

coordinate form, a graphical representation is essential to allow comparison and validation of other mapping to be carried out against the GTS. Reduction of survey data to a graphic scale involves generalisation and the degrading of precision if carried out manually (there is no such degradation for digital mapping). This should be borne in mind when working with maps. It should also be noted that the map (and indeed the survey data behind the map) is only necessarily correct for the time at which it was created and the passage of time may render the map inaccurate and outdated with regard to the physical features which it purports to represent.

The scale of the GTS map will depend on circumstances. It must be sufficiently large to allow comparison of other relevant mapping and dimensions. In general, a scale of 1:200 or 1:500 is recommended, but it may be larger if appropriate.

For a GTS map, a standardised format is recommended. A3 provides the best compromise in terms of the area covered and manageability. Where the area to be covered exceeds that which can be contained within an A3 sheet at the recommended scale, the survey area may be divided into a number of sheets and indexed on a smaller scale map.

Circumstances when a GTS is required - A GTS provides an accurate and comprehensive base map, at a particular point in time, against which the dimensional and geometrical accuracy of all other relevant mapping, or dimensions cited in a deed, may be validated, verified, or questioned. Digital mapping already in ITM15, such as Ordnance Survey or Land Registry mapping, may be overlaid directly on the GTS in a geographical information system for comparison and measurement of any anomalies. The accuracy standards and capture resolution related to the original scale of this, and any other mapping involved, should be borne in mind when carrying out this exercise. The anomalies inherent in scanning paper mapping for comparison with the GTS should be borne in mind and compensated for. A GTS carried out for the purposes of boundary identification, boundary analysis or boundary re-establishment is for those purposes only, and **not any other purpose** unless otherwise explicitly stated by the surveyor.

A GTS is essential where any form of dispute or disagreement is involved and the surveyor's analysis of boundary issues may be questioned by experts retained by a party opposed to his client, or where his expert testimony may be challenged by cross examination in court.

5.3.4 Boundary Definition Survey (BDS)

Where a new legal boundary between two properties is being defined and no physical boundary has yet been constructed, it should be set out on the ground by means of appropriate survey markers. These markers should indicate the change points in the legal boundary line direction and the legal boundary will consist

of straight lines between these markers. Both landowners should inspect the markers, preferably at the same time and in the company of the surveyor. This gives each property owner the opportunity to agree and confirm that the location of the legal boundary between their properties, as set out, is appropriate.

It is important that the subsequent physical boundary feature, in whatever form it takes, is accurately located on this agreed legal boundary. It is good practice, if circumstances allow, to delay the boundary definition until after the physical boundary feature is constructed so as to avoid discrepancies between the documented legal boundary, as defined in the parcels clauses, maps and coordinate tables incorporated in Deeds of transfer, boundary definition Deeds, or similar Instruments, and the physical boundary feature as constructed.

If the completion of a property transaction cannot wait for the construction of a permanent physical boundary feature, the surveyor may have to proceed with defining the legal boundary on the basis of the original survey markers. In this case, ITM15 coordinates, or dimensions from points of detail on nearby permanent structures, will form the record of the legal boundary definition. It is important that, if a boundary is defined on this basis, the definition, whether it involves coordinate tables, or intersecting measurements from permanent points of detail, should be clearly labelled as tentative, until such time as the more permanent physical boundary feature has been constructed and the permanent structure surveyed and defined. Not all landowners may agree to the cost of a double survey visit, but it is good practice if it can be achieved.

When a physical boundary feature has been constructed, or in the case that one already exists, the surveyor should get the agreement of the two landowners regarding where, relative to the physical boundary feature, the legal boundary is located. Is it a party structure? Is the structure wholly owned by one or other of the parties? Are there issues with copings or foundations? Has access for maintenance been agreed? etc. Once certainty is arrived at, the boundary should be defined using text description, annotated sketches and photographs. This information is normally contained in the contract of sale.

It is recommended that the legal boundary should be further fixed, by means of ITM15 coordinates, or by intersecting dimensions from points of hard and permanent detail on constructions in the vicinity. In this context, it should be borne in mind that deriving ITM coordinates for the legal boundary points, using GNSS and total station technology is the preferred option, as the resulting definitions of location are not reliant on the survival of physical features on the ground and additionally, the coordinates and maps derived from those coordinates will be in the same reference frame as other ITM15 based mapping that may be relevant to the boundary, for instance a GTS, if carried out, OSI mapping or Land Registry mapping. The common reference frame will facilitate ease of superimposition and

graphical comparison. The alternative method of intersecting dimensions from permanent structures is acceptable, provided due care is taken to avoid conflicts or anomalies in the descriptive definition of the points and the coherence of the dimensioning, but it is a second-best choice which should only be resorted to if there is good reason why boundary definition by ITM15 coordinates derived from GNSS/total station survey is considered inappropriate.

Change points, between straight line segments should be chosen on the physical boundary feature, corresponding to the location of the legal boundary. If the boundary is a hard feature, such as a wall or fence, suitable and identifiable points of detail in the construction, where the legal boundary changes direction, can be selected. In cases where the boundary feature is “soft”, such as a hedge, ditch, or earthen bank, it would be necessary to insert permanent markers, such as rebar or galvanised tube at the legal boundary change points. The location of these points should then be surveyed, defined in ITM15 coordinates and tabulated in a Defined Boundary document and delineated on a map, or alternatively, fixed by dimensions from permanent points of hard physical detail, or permanent survey markers at some distance from the physical boundary feature, should be measured and the resulting network of dimensions recorded on a map.

The surveyor should adopt rigorous checking procedures to guard against gross errors. Because of the legal importance of the coordinate values, or dimensions, in defining the legal boundary, it is vital that no error should find its way into these values and independent confirmation of their accuracy and precision is essential.

In addition to actual boundary markers, the locations of other reference points, either existing physical features or inserted survey markers with a degree of permanence, may be established and left in place. Such points may form an integral part of the boundary definition as the boundary change points on the physical boundary may have been fixed by dimensions and intersection from these reference points external to the boundary. All these points should be carefully described and documented and if GNSS/total station survey methods are being used, their ITM coordinates should also be derived.

It should be noted that the coordinate table defining the legal boundary change points, or the intersecting dimensions from fixed points, together with the actual legal boundary features defined on the physical boundary, jointly become the definition of the legal boundary and the surveyor should ensure that there is no conflict between the coordinates or dimensions, on one hand, and the physical boundary locations they represent, on the other. In the case of ITM coordinates being used, they should be standardised to a precision of three decimal places, i.e., to the nearest millimetre by the addition of trailing zeros where necessary. It is understood that BRS (section 5.3.5) would

normally not be capable of using such precision to millimetres. Nonetheless, the definition stands in its own right regardless of the technology that may be used to realise it on the ground.

In the event of future dispute regarding the location of the legal boundary, the definition of the boundary in terms of locations relative to the physical boundary feature, i.e., text description, annotated photographs and sketches and mapping based on these boundary locations, should be adequate to resolve the matter. In the event of the physical boundary being moved, removed without trace, or having been rebuilt, recourse may be had to the ITM15 coordinates or the network of dimensions, and the location re-established on the ground, based on these measurements.

A coordinate list and map, or a map showing the intersecting dimensions from fixed detail, will form an integral part of a Deed of Transfer, Defined Boundary Deed, Deed of Rectification, application to Land Registry for a conclusive boundary, or similar instruments where a legal boundary needs absolute clarification. This procedure should apply in all instances where a sub-division is required and a new boundary line is being created, or where an undefined legal and physical boundary exists and it is being defined by agreement, or by court judgement. In the context of litigation and a court judgement, it may be important to note that judges and counsel are much more comfortable when dealing with physical features and their definition, rather than intangible coordinates.

The map should include the coordinate table to assist in identifying and understanding the layout of the coordinated points. The coordinates, not the map, define the boundary location. Equally, if using dimensions from points of permanent detail, the written dimensions and not the map graphic define the boundary location. The mapping used for background or context may be either a GTS, if one was prepared, or a section of suitable OSI mapping. If using OSI mapping, the map should preferably be reproduced at the scale at which it was published. If enlargement is required to allow particular detail to be drawn, it should be clearly stated the OSI detail is not reproduced at its original scale and accuracy will be no better than that of the original. It should also be noted that anomalies may be introduced by the enlargement process. Care should be taken to distinguish between those lines and points that define the legal boundary, as opposed to the background map detail. Examples of a Legal Boundary Definition Deed is provided in Appendix F, and a suitable layout for a Defined Boundary coordinate table, coupled with a sample index map, is included in Appendix P.

5.3.5 Boundary Re-establishment Survey (BRS)

This procedure is simply the reverse of a boundary definition survey. It may be required where a physical boundary has been moved or obliterated and the legal boundary definition

related to this physical boundary is no longer discernible. Recourse therefore must be had to the definition provided by the ITM coordinates or intersecting dimensions from permanent structures.

It must be understood that this procedure is intended, in the first instance, for the re-establishment on the ground of the location of legal boundaries which have been previously defined using the BDS method already outlined.

It should be noted that the process of establishing a ground location, or comparing the mapped location, of any feature marked on any map is possible within the constraints of the accuracy of the map, the scale of the map, or the degree to which physical features on the ground can be accurately identified on the map. Such processes may be carried out in the context of researching a boundary where there is lack of clarity, ambiguity or dispute between landowners. There is a hierarchy of authority to such mapping. At the top of this hierarchy stands the parcels clause and deed map of the relevant deed. Unfortunately, deed maps are often seriously inaccurate, badly drawn, and generally defective from a detailed information and surveying point of view. Second in line stands the physical boundary feature, but this may have become dilapidated, been moved, or been destroyed. Lastly, comes the Land Registry Title Plan delineations and the OSI mapping on which it is based. Both of these are subject to the caveats contained in the Land Registry/OSI joint statement (Appendix H). All of these sources may, to a greater or lesser extent, provide evidence supporting the possible location of a legal boundary, in the course mediation or litigation.

A BRS consists of taking the data from the Defined Boundary Deed and Defined Boundary Map or similar authoritative documents, and using this data to identify the legal boundary points on the ground, using the same, or equivalent, methods to those used to derive the documented definition of the legal boundary in the first instance. In the case of ITM15 coordinate definition, it should be borne in mind that the coordinate values, once tabulated and agreed, are deemed authoritative and represents the location of the legal boundary, barring any errors identified later. As explained in the previous section on BDS (section 5.3.4), there should be no conflict between these coordinates and the real-world physical boundary feature locations they represent. However, common sense dictates that both surveyor and client need to exercise reasonable judgement regarding any potential precision differences between the actual physical boundary markers and their coordinated locations. Should the physical boundary markers continue to exist and there is no evidence of interference or movement, they would form the indicators of the legal boundary location. It is only in their absence, or partial loss, that a BRS from coordinates or dimensions would be needed.

It should be noted that where physical boundaries, or boundary markers, have disappeared or have been moved, the process of locating points on the ground, which the coordinates, forming

part of a previous legal boundary definition represent, will involve survey methods where an amount of statistical error will exist, depending on the methodology used. Using current GNSS/total station survey methods to re-establish points, it is likely that locations would not vary by more than +/- 5cm from the coordinate value. If accuracies greater than this are critical to any particular case, then this is an issue that must be considered by the surveyor.

5.3.6 Boundary definition in Multi-Unit Developments

There are two types of boundaries normally found in multi-unit residential developments:

- a) The external boundary to the site of the development - This external site and the communal spaces and structure within the building are usually held in freehold by the owners' management company (OMC).
- b) The boundary between the individual apartments owned by individual residents and the property held by the OMC - Such apartments are normally held in leasehold, and although it has been possible to register them as freehold since 2009, the use of leasehold mainly persists currently.

In the case of the site boundary, the issues already dealt with in this document regarding the surveying and definition of legal boundaries to land parcels apply. However, the legal boundary between the leaseholder's apartment and the property held by the OMC requires extra comment.

The legal boundary between the leasehold apartment and the freehold communal structure cannot be easily inspected, and may be complex. Once wall, ceiling and floor finishes are in place it is impossible to see what lies behind them without opening up and no property owners will accept such damage to their property. Reliance cannot be placed on the construction drawings for the as built reality may not be the same as the as designed intention. The legal boundary issue is normally dealt with by a careful text specification indicating which features, structures and components lie within the control and ownership of the leaseholder, and to what extent the leaseholder exercises such control, and which features lie within the ownership of the OMC. However, it is normal practice for an architectural floor plan of the relevant level which identifies the particular apartment, to be supplied in compliance with the requirements of the Land Registry Mapping Guidelines Appendices 5 (a, b and c), (section 7.8). The development of BIM technology may influence this issue in the future and the accurate mapping of three-dimensional structures should be kept under review.

Simpler multiple structures, such as maisonettes, where there is no OMC and where freehold tenure may exist for each property,

can be amenable to the delineation of legal boundaries against conventional architectural drawings. Each such instance would need to be reviewed individually.

In calculating the floor areas, one or the other of the standards set out for residential building in either the International Property Measurement Standards (IPMS)⁵ or the RICS Guidance Note: Measured surveys of land, buildings and utilities⁶ should be followed.

In the matter of property registration, the Land Registry lays down certain requirements with regard mapping for Multi-Unit Developments (MUDES) and these issues will be dealt with in the chapter on Property Registration.

⁵ *International Property Measurement Standards Coalition, 2016, International Property measurement Standards: Residential Buildings, International Property Measurement Standards Coalition, pp1-51*

⁶ *RICS, 2014, Professional Guidance Note: Measured surveys of land, buildings and utilities, 3rd edition, Royal Institution of Chartered Surveyors, London, pp1-57*

6. Maps and Reports

6.1 Analysis

One of the most important aspects of the process is the methodology used for the analysis and how that is described in the report to aid understanding by non-surveyors. It should be well written and logical. It may be helpful to describe how all of the available documentation, maps and plans have been examined, how the survey has highlighted the current physical extent of the property, and how the original boundary definition in the deed maps has been transferred onto the current GTS.

The analysis evaluates the evidence and attempts to determine the most likely position of a boundary. It examines the legal boundary from the deed map and the Land Registry Title Plan delineation versus the physical boundary as captured by the GTS. Since the Folio File Plan was created from the Instrument submitted to create the folio, it would be normal to expect that the legal boundary from the Deed and the Title Plan delineations would correlate well with one another, however, this is regularly not the case. Once this evaluation is completed, the legal boundary and Title Plan delineation are compared to the physical boundary as captured by the GTS.

Although the Deed Boundary takes precedence as the primary evidence, the physical boundary can supersede it if it is longstanding (information from the predecessor in title may be required), or agreed by the parties, but this must be proved with evidence and must undergo a legal process to be accepted. The Title Plan delineation is the least reliable evidence for parcel boundaries.

6.2 Maps and Plans

Surveyors normally present their findings visually by way of a map or plan which should be annotated to bring the reader's attention to any important issues. All maps and plans supplied should normally be at least A3 in size to provide sufficient space to ensure clarity.

Maps, that have not been confirmed (by the surveyor who produced the map), as depicting the parcels clause from the conveyance to which it will be attached, should not be used.

A map of a plot of ground is only likely to include specific information of relevance to the matter it was requested to

depict. Therefore, it is important to note that maps and mapping are generally only prepared for a very specific purpose, and any use contrary to that purpose may result in avoidable errors.

6.3 Reports

In addition to the usual map or plan the surveyor should also include a short letter/report to explain the brief, the purpose of the map, and an explanation of the issues that the map clarifies.

6.3.1 Summary Reports

The nature and complexity of the report will depend on the issues under consideration and its purpose. It could simply consist of a map or plan and an explanatory letter or memorandum, primarily for the client or their legal advisor. The plan and accompanying written text should accurately cross-reference each other in terms of colours, scales, notations and so on.

6.3.2 Detailed Reports

In contentious cases, the report is the document that will be passed around all the legal professionals involved in the dispute, and will be scrutinised by the presiding judge in the court hearing. It should therefore be of a very high standard, not only in its content but also in the way it is presented. The surveyor should be aware at the time of preparing the initial report, that each fact referred to, and every opinion expressed, will be subject to cross-examination by counsel acting for the other side. The professionalism of the surveyor will be judged on the quality of the final report and the detailed methodology used from the GTS through to the analysis and conclusions, so great care should be taken in its preparation.

The surveyor should be able to support any assumptions, opinions or facts by direct reference to analysis, expertise or published/learned documentation such as SCSl and RICS practice and guidance notes. Surveyors should expect that any contentious statement is likely to be challenged.

Each surveyor will in time develop their own style of presentation and compilation, but the following generic sub-headings recommended by Tottenham *et al* in their Guide to Expert Witness Evidence⁷ are suggested for preparing detailed boundary reports

⁷ Tottenham M, Prendergast EJ, Joyce C, and Madden H, 2019, *A Guide to Expert Witness Evidence*, Bloomsbury Professional, Dublin, p1-397

intended for court hearings (see chapter 9 on Litigation):

- Issue in question
- Qualifications & Expertise
- Acknowledgement of duty to the court and disclosure of Financial and Economic interest
- Essential facts of the case
- Facts in dispute

- Investigations carried out, including equipment & methodology used
- Summary of factual conclusions based on investigations
- Academic or other secondary material consulted
- Reasoned conclusions on the issues
- Appendices containing all ancillary documents such as deed and plans contained and presented preferably in the same orientation which must be cross-referenced to the main body of the report.

The surveyor's opinion should arise out of the summary of factual conclusions, and it should be clear to the reader that this is the case. It is recommended good practice to list all the available evidence used in the analysis and highlight its provenance and its accuracy (see Appendix C).

It is important to emphasise that it is imperative to be very careful not to overstate any finding or issue in a written report. A written report that contains an overstatement for effect, is likely, in the event of a courtroom cross examination, to provide the barrister with the opening needed to discredit the surveyor's competence.

The key aspect of a boundary report is that it should explain and guide the layman (or another non-survey professional) in a way that will illuminate the analysis of the dispute without being condescending but still retain the key technical facts that form the basis and logic of the analysis. Technical and mathematical jargon should be avoided.

The conclusion of the report allows the surveyor to summarise the research and the analysis and to arrive at an expert opinion. The body of the report should outline the findings, while the conclusions will interpret those findings in an unbiased manner. It is worth emphasising that this is purely your expert and professional opinion. Expert witnesses in court proceedings owe a primary duty to the court to assist it in its deliberations. The report may also be used during ADR procedures such as

mediation.

The court will expect total candour, including an explanation of those areas where the evidence may not support the instructing party's case. The role and function of the expert in giving evidence to a court needs to be explained from the very outset to clients and their advisers. If, in your opinion, the facts do not support your client's case, it makes sense to discuss this with them at the earliest opportunity. They may wish to consider their position or obtain a second opinion.

How the report is presented reflects on the professionalism of the surveyor. It is important that parts of the report do not become separated, as this could lead to one of the parties claiming that they have not been shown the full details.

6.4 Meetings between surveyors

These may take place as part of ADR, court proceedings or prior to finalising reports on a 'without prejudice' basis. Surveyors should approach these on a proactive and cooperative basis with a view to facilitate early settlement and reduction of costs. Meetings offer the opportunity to share information and establish areas of agreement and disagreement, and to see how these may narrow or be resolved. The outcome of any meeting should be for the surveyors to prepare a joint statement stating the status of all issues, and explaining as required the reasons for any unresolved issues.

7. Recording the outcome in the Land Registry

All procedures that involve changes to land title boundaries, no matter how small, need to be properly recorded and submitted to Land Registry for incorporation into the mapping register so that:

- a) the Register correctly mirrors the situation on the ground;
- b) the information is available for review in the future if required.

7.1 The Registration of Title in Ireland

Registration of title in Ireland operates on a non-conclusive boundary basis. The lines outlining title parcels on Land Registry mapping indicate the general location of the parcels but do not provide a definitive indication of the exact location of the legal boundary to the parcel, or the ownership of boundary features.

The Land Registry Practitioner's Guide⁸ paragraph 2.2 states "The non-conclusive boundary system will not indicate whether a title boundary includes a hedge or a wall and ditch or runs along the centre of a wall or fence or runs along its inner or outer face or how far it runs within or without it or whether or not the land registered includes the whole or any portion of an adjoining road or stream." It is also worth quoting John Deeney, former Deputy Registrar of Titles, statement on the subject in his book *Registration of Deeds and Title in Ireland*⁹:

"Under present arrangements, whether the title to land is registered or unregistered, the primary source of the boundary line between any two adjoining properties is the original deed whereby the ownership is divided. On first registration, this might comprise the descriptions contained in a deed or map endorsed on such Deed or a prior Deed or both Deeds and Maps read together. These matters together with possession, the contract map, the application map, use and occupation, other Deeds, features, witnesses, inferences and presumptions, can all be taken into account if the issue of the precise position of a boundary line falls to be determined by the court. However, it is not the case that the boundary as shown on the Land Registry map is of no relevance in the case of a neighbour dispute, as in the absence of any other evidence, it may well prove conclusive. An effect of the rule is that the State guarantee does not apply in the case of non-conclusive boundaries; thus, compensation is not payable for discrepancies within the acceptable margins of error. It is to be noted that whether or not a discrepancy is

substantial or minor in nature may not necessarily depend on the significance to the title of the portion involved".

In short, although the Land Registry Title Plan delineations may provide some evidence as to the expected location of a legal boundary and may be useful in the absence of any other evidence, it cannot define, nor can it be relied on to determine, the precise location of a legal boundary unless agreed by the parties.

As a matter of policy, the Land Registry use OSI large scale mapping as the base for their records and may adopt OSI topographical detail where this appears both necessary and obvious, within the flexibilities of non-conclusive boundaries (See Appendix H for the joint statement on this matter by OSI and the Land Registry). Parcel outlines may 'migrate' as newly created physical boundaries are surveyed by OSI and the Land Registry's mapping is revised accordingly. This is done to maintain the connection between Land Registry parcel lines and the related OSI topographic line feature and to maintain the consistency of the Land Registry archive.

It is very important to understand that Ordnance Survey mapping depicts topographic features, i.e., physical features. It does not show legal boundaries. Surveyors should be aware that Ordnance Survey mapping is subject to the accuracy and level of details inherent in the mapping's scale and method of creation. See the OSI accuracy statements (Appendix D) and the joint OSI & Land Registry statement (Appendix H).

There is no formal publicly accessible register of legal boundaries in Ireland, such as a legal cadastre. A legal boundary is normally defined in a Title Deed and associated Deed Maps, in boundary definition deeds, or agreements, made between adjoining landowners, or in the form of conclusive boundaries, registered with Land Registry. These are definitive as to the location of legal boundary. These instruments are submitted to Land Registry as part of the title registration process but, except in the case of registering a conclusive boundary, there is no comprehensive, publicly accessible register for such defined boundaries.

For this reason, the mapping required for the registration of title to a parcel on one hand, and the mapping required for the definition of legal boundaries on the other, are treated separately and require different mapping and survey procedures. The

⁸ *Property Registration Authority, 2014, Practitioner's Guide 2014: Mapping Procedures for first registration of a property, Sub-divisions of registered property & Rights over Registered Property, Property Registration Authority of Ireland, Dublin, pp1-9*

⁹ *Deeney J., 2014, Registration of Deeds and Title in Ireland, Bloomsbury Publishing, London, pp1-522*

procedure for defining a land title boundary is outlined in the section 5.3.4 on BDS.

The Land Registry publishes comprehensive mapping guidelines¹⁰ and surveyors preparing mapping for Land Registry should be fully conversant with these guidelines, and particularly the Practitioner's Guide¹¹. A wealth of detail on map formats and examples of map layouts are contained in these guidelines and their associated appendices and therefore much of the information presented there will not be repeated in this guidance note.

Land Registry allows for applications for title registration to be made on approved paper mapping, where the new sub-division boundary line is delineated by hand, using pen and ink. This form of mapping is not recommended as the potential for errors is high. The use of digital methods is recommended for preparing these maps, where accuracy can be controlled and analysed.

Land Registry will accept application maps based on six map types:

- a) Special Registration Map (SRM)
- b) Title Plan (TP)
- c) Official Map Search (OMS)
- d) Original OSI Land Registry compliant map (LRCM)
- e) A computer-generated map (CGM)
- f) CAD file (CF).

Some issues arise because of the formats in which these maps are made available.

The Title Plan delineation relates directly to a specific folio. The Folio File Plan delineation, incorporated in the Title Plan, is printed on a single A3 sheet of paper. If the area enclosed by the Title Plan delineation is extensive, it may be printed at a scale that is too small to be accepted for a registration application (1:10,000 or 1:5,000). If this is the case, one of the other two options (SRM or OMS) are available. These latter maps can be ordered on Land Direct and the page format (A3 or A4), scale and extent can be selected by the customer (Land Registry Mapping Guidelines, Appendix 8(a)).

Land Registry will also accept an OSI Land Registry compliant maps, covering either an A3 or A4 extent in paper format. This paper map comes fully formatted, with margin rules, scale bars, the required ITM coordinates displayed, plus title block and other appropriate marginalia. Land Registry stipulate that this map should be a hard paper product supplied in this format directly from OSI (Land Registry Mapping Guidelines Appendix 8 (b)).

In all four cases the maps specified above are hard-copy paper maps, on which the Land Registry require the registration detail to be drawn on the original supplied map. Appendix 8(A) section 1.4 specifically states "Photocopies, scanned copies or screen captured images of Land Registry map(s) are not acceptable for registration purposes".

It is recommended therefore, that surveyors use the Computer-generated Map (CGM) option, when preparing maps for applications for registration to Land Registry. The Land Registry sets out its requirements for CGMs in Land Registry Mapping Guidelines Appendix 4. Suitable digital base mapping can be obtained from OSI in two forms:

- a) Digital Planning Pack mapping at 1:1,000 or 1:2,500 scale covering an A3 extent, in AutoCAD .dwg vector format.
- b) Digital Landscape Model, for a customer defined extent, also in AutoCAD .dwg vector format.

The procedure for registering a property digitally is set out in Land Registry Mapping Guidelines Appendix 7(a) for scheme developments and in Appendix 7(d) for non-scheme developments.

As has been noted, the above procedure may involve making a request to OSI to check or amend discrepancies. If the discrepancy is sufficiently small that neither OSI or Land Registry consider an amendment justified, then the newly surveyed boundary should be adjusted to close the polygon. It would be prudent to inform Land Registry of the discrepancy and of the alteration to the actual surveyed boundary line, needed to achieve this polygon closure. The accurately surveyed boundary line should be submitted on a separate map, to Land Registry, with a covering letter.

7.2 Mapping for First Registration

Mapping for a first registration is, in many ways, similar to mapping for a new sub-division. The property may have boundaries with parcels that have already been registered, but also newly created boundaries. Existing lines delineating adjoining registered title parcels must be respected, (or identified as discrepant and the necessary means to resolve any discrepancy pursued) unless the client wishes to engage in a process of boundary measurement and agreement with these adjoining landowners, to define and/or to make these boundaries conclusive. Otherwise proceed as for mapping a sub-division.

¹⁰ Property Registration Authority, Land Registry Mapping Guidelines, Dublin, <https://www.prai.ie/mapping-guidelines/>

¹¹ Property Registration Authority, 2014, Practitioner's Guide: Mapping procedures for first registration of a property, sub-divisions of registered property, and Rights over registered property, Property Registration Authority, Dublin, pp1-9

In the case of a first registration it is necessary to examine the coincidence of the Title Deeds for the property with the current extent of the property on the ground. Care should be taken when geo-referencing the Deed Maps onto ITM15 to minimise any spatial errors in this process.

7.3 Mapping for Transfer of a Complete Folio

In the case of the transfer of a complete undivided registered parcel, where there are no newly created boundaries and no changes to the existing Land Registry maps, no mapping is required with the application. However, a surveyor consulted in such a case, may consider it prudent to recommend that a BVS, or at a minimum, a BCS should be carried out to ensure that there were no issues with the existing mapping's definition of the parcel.

7.4 Mapping for Registration of Title of a Sub-Division Parcel

To create a map for the registration of a defined boundary, a survey should be carried out as set out in section 5.3.4 on BDS. The map should be printed at an appropriate scale to fit an A3 or A4 sheet. This map is purely an indicative map to assist in locating the boundary. The legal boundary is defined by comprehensive text definition, sketches, and photography, of the change points in the legal boundary combined with the ITM coordinate list defining these points, or the intersecting dimensions from permanent structures, locating these points. This should be made clear on the map and coordinate schedule. This map and boundary point descriptions should be attached to the ITM15 coordinate schedule and both should be attached to, and referenced by, a completed, signed and witnessed Boundary Definition Deed. This instrument should be submitted to the Land Registry to be maintained on record with the parcel registration, with which it is associated. Land Registry Rule 141 covers this procedure (Appendix O).

Land Registry requires that mapping for title registration complies with its mapping requirements to submit closed polygons for the registration of title parcels. Because of the difference between mapping for title parcels and mapping for legal boundaries, there are likely to be discrepancies between high precision BDS of newly created sub-division boundaries and existing title parcel delineations on Land Registry Title Plans. Where newly created boundaries in sub-division, are involved, it is recommended that these boundaries should be defined, or made conclusive, as agreement and accurate definition is facilitated by the relationship between vendor and purchaser. In preparing maps for title registration, it may be necessary to amend the newly created boundary line to allow

the title parcel polygon to close. This amendment should be noted in the application for title registration and the surveyor should submit a separate map to Land Registry with the accurately surveyed line shown. If the anomalies go beyond generalisation and serious discrepancies are noted, these should be addressed in the first instance to OSI, assuming that the discrepancy is with their data (see Appendix L for form to request OSI to remedy discrepancies in their mapping) and secondly to the Land Registry, if the issues concern the Land Registry's delineations specifically.

If a new legal boundary has been created as part of a sub-division and that new boundary has been defined by a BDS (section 5.3.4), then it is recommended that the title to the new parcel be registered digitally with the Land Registry and the defined boundary should be registered separately, either by lodging a Defined Boundary Deed with Land Registry or by having the defined boundary registered as conclusive. If the new legal boundary does not have a permanent physical boundary feature in place at the time of survey, a tentative definition might be put in place, to be confirmed when the physical boundary feature is constructed. If the new boundary is not being accurately defined then the new parcel may be registered with non-conclusive boundaries, should that be the preference of the client.

7.5 Mapping for a Deed of Rectification

When an error is apparent in the Land Registry Title Plan, i.e., where a line of delineation on the Folio File Plan clearly differs from the same feature on the map forming part of the Deed of transfer and from the accepted physical boundary feature on the ground, the owner may apply to the Land Registry to have the error rectified. This is done by means of a Deed of Rectification. The procedure is outlined in Section (32) of the Registration of Title Act 1964 as amended by Section (55) of the Registration of Deeds and Title Act 2006. Rule 141 of the Land Registry Rules (2012-2021) applies as regard the mapping. This process normally requires the agreement of the owner of the adjoining property, though the Land Registry can make the amendment unilaterally, if it is clear that there is no loss to any party. A BDS is advised to identify and define the correct boundary location, and the BDS map should be submitted to Land Registry together with the application map required.

7.6 Mapping for a Boundary Definition Deed by Agreement

If two adjoining landowners wish to agree the line of their common legal boundary, or any portion of it, they may do so. There are two procedures available:

- a) The landowners may agree the common boundary between their properties on the basis of a Boundary Definition Deed
- b) The landowners may apply to Land Registry to have the defined boundary entered as conclusive into the Mapping Register.

A full boundary definition is required, including definition and agreement of the legal boundary on the ground, relative to physical boundary detail or installed boundary markers, comprehensive description of these boundary change points, by text description, sketches and photographs and a BDS map including the definition of the legal boundary change points by ITM coordinates.

Both landowners should execute such a deed (template supplied in Appendix F), including the boundary definition as part of the deed. It should be noted, that it is considered that such a deed is only binding as a contract between the two landowners, and does not bind their successors in title, or any other person.

7.7 Mapping for Registering a Boundary Conclusively

There is provision in the legislation and the Land Registry rules for the registration of a conclusive boundary between properties. Rules 139 and 141 apply (Appendix O).

The boundary definition, surveying and mapping procedures follow the same guidance as outlined for a BDS. The key difference is that in the case of a conclusive boundary, the defined boundary forms part of an application to Land Registry to have the boundary, so defined, entered as conclusive in the Mapping Register, in accordance with the rules and legislation cited above (Appendix O).

Unlike a boundary defined by deed between the landowners, a boundary that has been entered in the register as conclusive by Land Registry is not just binding on the current landowners, but also binds their successors in title.

7.8 Mapping for Multi-Unit Developments

The law relating to MUDs is set out in the Multi-Unit Development Act 2011¹². Land Registry guidelines for mapping are contained in Land Registry Mapping Guidelines Appendices 5(a), 5(b) and 5(c). A useful discussion on the issue of freeholds in MUDs is

contained in the Law Reform Commission Consultation Paper on MUDs¹³. A surveyor carrying out mapping for MUDs should be familiar with all three documents.

Because of legal difficulties associated with freehold ownership in MUDs (see the LRC consultation paper) it is unusual for this form of ownership to be encountered in Irish practice and issues related to freehold registration will not be discussed here. The surveyor should seek expert guidance if specific cases, involving freehold, are encountered, although the mapping requirements for both leasehold and freehold are considered to be the same.

The common arrangement is for the individual residential units to be held under long leases (up to 999 years) and for common areas (defined in the legislation), together with the reversion of the leaseholds to be held in freehold by an Owners' Management Company (OMC). Mapping for the registration of the freehold development parcel on the terrain surface should follow the appropriate mapping procedures already outlined in this guidance note. For the mapping of individual apartments, the Land Registry guidance is comprehensive and should be followed in detail. It is not proposed to reiterate that guidance here, but a number of comments, on matters that may not be fully clear from the Land Registry document, may be helpful.

The Land Registry Mapping Guidelines for MUDs cater for a number of scenarios:

- a) For registration post June 2011 where registration is compulsory for the development and all units within the development.
- b) For registration prior to June 2011 where individual units may need to be registered as ownership is transferred.

In the first case a comprehensive design or construction plan will have been prepared by the developer and this would form the base for the registration of the individual residential units. It is important that this plan should be verified to ensure that it represents the current "as built" reality and that it is not a design plan that may have been redlined during construction. Land Registry make arrangements for the acceptance of multi-line AutoCAD drawings. The Land Registry guidance should be carefully followed. The procedure is for the landowner to submit the development floor plan to Land Registry for approval. Land Registry will return a stamped and certified copy. The application for the registration of individual residential units should be submitted on a one-to-one copy of this returned certified copy. Land Registry does not specify a minimum scale for these floor

¹² *Oireachtas, 2011, Multi-Unit Developments Act, Stationary Office, Dublin, pp1-35*

¹³ *Law Reform Commission, 2006, Consultation Paper Series: Multi-unit developments, (LRC CP 42-2006), Law reform Commission, Dublin, pp-1-75*

plans, nor does it specify whether applications can be made in digital form, or whether the leasehold should be delineated in red directly on the certified paper copy. They do specify A3 as the maximum sheet size for the plan of an entire floor level. Depending on the configuration and extent of the building, there could be issues with regard to scale and legibility, in complying with this page size requirement and a policy of creating a number of separate A3 sheets, at an appropriate scale, with a smaller scale index map showing their interrelationship may need to be considered.

The second case can be more problematical if after the passage of time, comprehensive and accurate as built floor plans, at a suitable scale, may be difficult to acquire. Copies of design floor plans for the building should be available from the planning authority in which the building is located, but copies of these floor plans may also be difficult to acquire. Some planning authorities consider that the intellectual property for these floor plans is still vested in the architectural firms which drafted the plans, and they require written permission from such firms to acquire copy documents. The Land Registry will accept a plan of the complete floor containing the apartment of the individual property to be registered, with location being defined by ITM coordinates and levels relative to OS datum.

ITM coordinates and levels AOD

The accuracy of the ITM coordinates and levels related to OS datum supplied to the Land Registry in the context of MUDs should be as follows:

- a) Two ITM coordinate intersections are required for floor plans and the norm would be to supply these to one metre, rather than putting in the three trailing zeros after a decimal point;

- b) Floor and ceiling heights are required for floor plans and the norm would be to supply these to one decimal (accurate to 0.1m) above Ordnance vertical datum at Malin Head.

In line with the principle of non-conclusive boundaries, the use of ITM coordinates and levels related to OS datum on MUDs floor plans are for general location purposes only. They should be sufficiently accurate to ensure that there is no ambiguity in relation to which apartment or unit is being defined.

Overlaying the floor plan digitally, relative to the building outline (which is shown in blue) as delineated on the OSI map, to achieve a best fit, and transferring sufficient coordinate points from the reference frame of the OSI map to the floor plan, to generate the required crosshairs and coordinate values, should be acceptable. If the surveyor chooses, ITM coordinates may be derived on the ground, convenient to the development, using GNSS methods.

In deriving levels, relative to Malin Head datum, for floors and ceilings within an apartment or unit, GNSS methods, may also be used. Note, however, the OSI no longer maintain benchmarks and those that still exist may have been moved or disturbed. Similarly, spot heights on roads may no longer be valid due to road resurfacing or reconstruction.

8. Alternative Dispute Resolution (ADR)

ADR is a general term used to define a range of approaches and techniques aimed at resolving disputes in a non-confrontational way. Not alone does ADR provide other, cheaper and less confrontational means of settling disputes, it has become common practice for judges to insist that litigants pursue such methods before bringing their dispute before the court.

There are five common forms of ADR – Mediation, Conciliation, Arbitration, Adjudication and Independent Expert or Expert determination. Mediation is by far the most common form of ADR used in the resolution of disputes regarding property boundaries and it is this process that will be dealt with in this document. If information is required on the other options, please refer to the SCSi Information paper on Alternative Dispute Resolution¹⁴.

Surveyors acting as mediators, or proposing to act as mediators, should be suitably qualified and experienced. The following qualifications, extracted from the list of criteria for inclusion of a member on the SCSi Panel of mediators, may be considered as the baseline qualification for the role:

- a) Minimum MSCSI/FSCSI
- b) Minimum 10 years post qualification experience in the appropriate surveying discipline.
- c) Successful completion of mediation training approved by an accredited training body, such as MII, CI Arb or RICS.

The full specification for inclusion on the SCSi panel of mediators can be found in the SCSi information paper referred to above.

SCSi offers a Dispute Resolution Service and it is recommended that any surveyor proposing to operate in the area of ADR should make themselves familiar with the details of this service and engage with it where appropriate. The legal framework for mediation is contained in the Mediation Act 2017¹⁵.

8.1 Nature of Mediation

The generally accepted description of mediation is a voluntary, non-binding, private dispute resolution process facilitated by a neutral person (the mediator), which enables the parties to reach a negotiated settlement. A core principle of mediation is that the parties control the outcome, rather than it being imposed upon

them. Unless required by contract, parties attend mediation voluntarily. Even where it is a contractual requirement, either party can terminate the mediation at any time. Mediation is usually a powerful first step towards settlement, restoring direct communication where it may have broken down previously. Section 6 of the Act sets out the legal context.

8.2 Role of Mediator

The role of the mediator is not to impose a solution, nor to advise the parties as to their legal rights and/or obligations. Rather, the mediator seeks to assist parties to work out their own settlement, on terms they can both live with, looking at a broad range of issues (not limited to legal rights or the facts of the case).

A skilled mediator should be able to:

- Reopen communications between parties
- Engage the parties into taking control of their dispute.
- Bring a fresh, neutral pair of eyes to an old problem.
- Take a broader perspective and help the parties to explore options and create suitable solutions.
- Help parties move toward a realistic, negotiated settlement, in a cost-effective manner that is capable of implementation.

A mediator is obliged by law to carefully consider any conflicts of interest in the mediation and withdraw from participation if such conflicts exist. The mediator should supply the parties with details of their qualifications, training, experience and continuing professional development. Copies of any Code of Practice to which the surveyor subscribes should also be provided to the parties.

In terms of the mediator's remuneration, the Act sets out that, unless ordered by a Court or otherwise agreed between the parties, the parties shall pay the mediator the fees and costs agreed in the agreement to mediate or share equally the fees and costs of the mediation. The fees and costs of a mediation shall be reasonable and proportionate to the importance and complexity of the issues at stake and to the amount of work carried out by the mediator. There are possible cost consequences should a party unreasonably refuse to mediate or attend the mediation (see Section 21 of the Mediation Act 2017).

¹⁴ Society of Chartered Surveyors Ireland, 2022, *Alternative Dispute resolution - Information Paper (1st edition)*, Society of Chartered Surveyors Ireland, Dublin, pp1-20

¹⁵ Oireachtas, 2017, *Mediation Act, number 17 of 2017*, Stationary Office, Dublin, pp 1-26

8.3 Advantages of Mediation

There is one crucial factor that makes mediation different from most other forms of dispute resolution: it does not involve a third-party judgment on who is right and who is wrong. Without fear of such judgment the parties have greater opportunity to work together rather than against each other towards a compromise and workable solution. Parties to a dispute may often interpret the same facts and events differently, and both may often have cause to believe that they are right. They see and interpret them through eyes conditioned by education, culture, age, environment, and other factors. In other adjudicative dispute resolution processes (e.g., courts, arbitration, adjudication, expert determination) the third-party arbiter imposes their interpretation of right and wrong regarding the subject matter, a potentially limiting way of resolving disputes. In mediation, the focus of the dispute is changed away from who is right and who is wrong towards a focus on what each party needs, to allow them to put the dispute behind them and to move on from it constructively. The parties, with the help of the mediator, negotiate towards fulfilling those needs in a way that will work best for both. Not only does this create an opportunity for a win-win outcome, but it can also save the parties money and time in reaching this point, while giving them better opportunity for solutions which meet both parties' needs.

The main advantages of mediation are as follows:

- Mediation is non-binding up until the point of agreement where the parties sign their mediation agreement and agree that it becomes binding in contract law.
- The key to any mediation is the fact that it is private, and the process is confidential to the parties, except as they may agree. This enables the parties to talk frankly about the strengths and weaknesses of their arguments, and the other side's case, without it prejudicing their position, if the case does not settle and goes to court. Negotiations and communications within the process are generally, subject to some narrow exceptions, inadmissible in subsequent legal or other proceedings.
- The mediator is neutral and is only interested in providing the parties with their best chance of achieving a settlement to their dispute.
- One of the key strengths of mediation is that the parties take control of the outcome and negotiate their own settlement, owning the outcome. They can decide to withdraw from the process at any time. Any final settlements may take into account other dispute resolution processes. It may also take into account matters that are totally outside of the dispute.

8.4 Agreement to Mediate

The Agreement to Mediate comes at the beginning of the mediation process and is an important first step towards a negotiated settlement. It is significant that the parties, before they have raised the issues in dispute, or met in a mediation session, have indicated and agreed to mediate - this forms a strong positive starting point and is their first step towards a collaborative resolution. The agreement to mediate should include:

- The manner in which the mediation is to be conducted.
- The manner in which the fees and costs of the mediation will be paid.
- The place and time at which the mediation is to be conducted.
- The fact that the mediation is to be conducted in a confidential manner.
- The right of each of the parties to seek legal advice.
- The manner in which the mediation may be terminated.
- Such other terms (if any) as may be agreed between the parties and the mediator.

The mediator will draw up the Agreement to Mediate after consulting all parties. Like all aspects of mediation, the agreement to mediate is at the discretion of the parties involved.

8.5 Mediation Agreement

It is up to each of the parties to determine if and when a mediation settlement has been reached between them and whether the mediation agreement is to be enforceable between them.

- It is usually drafted in line with the heads of agreement as agreed through the mediator.
- It cannot include anything which doesn't have the full agreement of all parties.
- The mediation agreement document is best dealt with in detail at the mediation where the parties may address any details which might later unravel the agreement or become obstacles to seeing matters successfully concluded.
- It will be agreed and signed by the parties.
- It will be legally binding, as a contract, if the parties so agree.
- It can be as simple or complex as the parties need, to effectively resolve the dispute.
- It should be drafted in straight-forward terms and plain English so as to avoid confusion or disputes over the interpretation, at a later date.
- It can include all terms of importance to the parties no-matter how unusual or minor.
- The legal status of a Mediated Agreement, if so agreed, is subject to standard contract law application and interpretation.

- Boundary agreements arising from mediated settlements are preferably in the form of a deed that can then be recorded within the parties Land Registry Folios.

If an agreement is not reached there is no penalty or downside. The parties retain all options previously available to them including:

- leaving the matter unresolved and moving forward.
- arranging another mediation session and trying again to reach resolution.
- identifying more information of input which may assist a further attempt to mediate.
- trying another ADR process such as arbitration.
- proceeding to litigation or, if the matter is already in court, proceeding to hearing.

The parties have the option to continue with the mediation sessions or discontinue them. In a court-referred mediation case, the mediation is simply reported as unsuccessful and the case moves forward in the courts. It should be noted, however, that there are possible cost consequences should a party unreasonably refuse to mediate or attend the mediation.

9. Litigation

9.1 Before the Courtroom

a) **Conflicts of Interest** – surveyors should check whether there is any conflict of interest before accepting an engagement from a client. It is common practice in Ireland to take on commissions for family or relatives, but if there is any chance of the issue proceeding to litigation, then it would be best to recommend another professional unconnected with the client. The initial assessment of conflict of interest might be brief, so when a case is being recommended for litigation, a more detailed assessment is advised.

b) **Providing statements of facts as evidence**

i. **Certificate of Identity** – is a signed statement by an appropriate professional outlining what they believe to be true regarding a property. It is an unsworn statement of facts.

ii. **Declaration of Identity** - is a document in which the declarant (the surveyor) makes a sworn declaration regarding the accuracy of the property boundaries, access to the property and the services used by the property. It is a prepared under the Statutory Declarations Act 1938, and it is signed and sworn in front of a solicitor who witnesses the document. A template is provided in Appendix G, as recommended best practice.

iii. **Affidavit** – is a sworn written statement from a witness in a case. It is normally drafted by a solicitor or barrister as a statement of your evidence. However, it is your statement, so review the draft minutely and rewrite it to capture the point exactly or remove any statements you disagree with. Once completed the affidavit is sworn in front of an independent solicitor and signed and witnessed by the independent solicitor. An affidavit can be submitted as evidence to the court.

iv. **Expert Witness Report for the Court** – The surveyor's evidence to the court should be presented in a detailed manner in such a way that it is both comprehensive and professional. The following template for chapter headings of such reports is recommended by Tottenham *et al* in their Guide to Expert Witness Evidence

- Issue in question
- Qualifications & Expertise
- Acknowledgement of Duty to the Court and Disclosure of Financial and Economic interest
- Essential Facts
- Facts in Dispute
- Investigations
- Summary of Factual Conclusions based on Investigations
- Academic or other Secondary Material Consulted
- Reasoned Conclusions on the Issues.

It is recommended that any maps appended to the report as appendices, should be a minimum of A3 in size to provide enough space to outline the issues clearly and with annotations.

c) **Arrangement of Dates for Hearings** - Solicitors arranging hearing dates should ask the expert witnesses, several months in advance, on which dates they are available. This allows the court's service to choose a hearing date when all the witnesses are available to attend. The expert witness should then be informed of the chosen hearing date. However, this can occasionally be overlooked, so the expert witness should contact the solicitor to confirm the chosen hearing date. Sometimes cases may take longer than one day, so it is necessary to ask the solicitor if attendance is needed on more than one day.

d) **Training** – The RICS re-published its Guidance Note for Surveyors acting as Expert Witnesses¹⁷, and SCSl have previously run training courses for its members on expert witness which were provided by La Touche Training in Dublin.

e) **Preparation** - If the boundary issue is unresolved by other means and leads to litigation, it is important that the surveyor briefs the barrister acting for his or her client before the court hearing. Litigation can take a long time to reach court from the date of the field survey, and it can prove valuable if the surveyor pays another visit to the site in the week before the court hearing, and re-reads the report several times to ensure that their recollection of the issues is fresh.

¹⁶ Tottenham M, Prendergast EJ, Joyce C, and Madden H, 2019, *A Guide to Expert Witness Evidence*, Bloomsbury Professional, London, p1-397

¹⁷ Royal Institution of Chartered Surveyors, 2020, *Surveyors Acting as Expert Witnesses (4th edition)*, RICS, London, pp1-66

9.2 Expert Evidence

a) **Expert Evidence** - The Law Reform Commission published a consultation paper in 2008 on Expert Evidence¹⁸ which led to the publication of its Report: Consolidation and Reform of Aspects of the Law of Evidence¹⁹ in 2016. This report included a draft *Evidence (Consolidation and Reform) Bill* as an Appendix, but to date this proposal has not been presented to the Oireachtas for consideration. The recommendations of this report as they relate to Expert Evidence are as follows:

- i. An “expert” is a person who appears to the court to possess the appropriate qualifications, skills or experience about the matter to which the person’s evidence relates (whether the evidence is of fact or of opinion), and who may be called upon by the court to give independent and unbiased testimony on a matter outside the knowledge and experience of the court, and that the terms “expert evidence” and “expertise” should be interpreted accordingly.
- ii. Expertise based on experience should be considered sufficient to qualify a witness as an expert and as suitable to offer testimony on any matter of benefit to the court, regardless of how such a person has acquired this knowledge, be it through formal training or incidental study, provided that the evidence is reliable and testable.
- iii. when assessing the issue as to whether a witness is to be considered an expert, account is to be taken of the length of time the witness has spent studying or practising in the particular area as well as, in the case of a retired person or any person no longer studying or practising in that area, the length of time he or she has spent away from the particular area.
- iv. The rules should not provide for any further test or tests concerning the evidence of an expert, including in the case of a report from an expert, obtained from outside the State.

b) **Admissibility of Expert Evidence**

- i. The draft *Evidence (Consolidation and Reform) Bill* should not abolish the common knowledge rule. Matters of common knowledge should remain outside of the range of matters on which expert evidence can be given.

- ii. The introduction of a threshold reliability test for the admission of expert evidence is not recommended.

c) **Duties, Immunity and Procedural Aspects of Expert Evidence**

- i. The Commission recommends that the Minister for Justice and Equality may publish codes of practice for expert witnesses, prepared by a representative group of persons with suitable knowledge of the relevant areas, and established by the Minister for this purpose; that expert witnesses would be required to comply with the contents of such a code of practice; and that any such code of practice shall, to the extent that it provides practical guidance for a court on an issue before the court, be admissible for that purpose.
- ii. The expert has an overriding duty to the court to provide truthful, independent and impartial expert evidence, irrespective of any duty owed to the instructing party.
- iii. The expert has a duty to state the facts and assumptions (and, where relevant, any underlying scientific methodology) on which his or her evidence is based and to fully inform himself or herself of any and all surrounding facts, including those which could detract from his or her evidence and, where relevant, his or her expressed opinion.
- iv. The expert has a duty to confine his or her evidence (whether of fact or opinion) to matters within the scope of his or her expertise, to state clearly when a matter falls outside the scope of his or her expertise and to distinguish clearly between matters of fact and matters of opinion when giving his or her expert evidence, whether given orally or in the form of a written report.
- v. The expert has a duty to his or her instructing party to act with due care, skill and diligence, including a duty to take reasonable care in drafting any written report.
- vi. A prior professional relationship should not necessarily prevent a person from acting as an expert witness.
- vii. A solicitor instructing an expert witness which is not covered by indemnity insurance is under an obligation to make his or her client and the expert witness fully aware of the possible consequences of the failure to obtain

¹⁸ Law Reform Commission, 2008, *Consultation Paper: Expert Evidence, LRC CP 52-2008, Dublin, p1-392*

¹⁹ Law Reform Commission, 2016, *Report: Consolidation and Reform of Aspects of the Law of Evidence, LRC 117-2016, Dublin, p1-48*

such insurance. The Commission further recommends that a solicitor be required to sign a certificate to the effect that he or she has complied with this duty.

9.3 In the Courtroom

- a) **Court Environment** – most court cases will be heard in front of a minimum of 20 to 30 people comprising the judge, the courts service personnel, legal teams and expert witnesses for both the plaintiffs and the defendants. There may also be members of the public and people from the media attending and the evidence given is not confidential. The surveyor should be very careful regarding what is said and how it is said.
- b) **Duty of Expert Witness** – their primary duty is to the court to assist the judge in finding the truth which supersedes any duty owed to the client. The expert witness must also :
- i. Report, in oral evidence,
 - ii. Be independent of the client and legal team,
 - iii. Give evidence within their own expertise to assist the court in reaching its own decision,
 - iv. Research or ascertain the relevant facts, to educate the court in specialist or technical knowledge,
 - v. Reach a reasoned and honestly-held opinion,
 - vi. Co-operate with the client and instructing legal team,
 - vii. Co-operate with other legal teams when required,
 - viii. Co-operate with other experts,
 - ix. Communicate any change of mind,
 - x. Comply with the directions of the court.
- c) **Responsibility** – The surveyor is presenting themselves as an expert in a particular area of expertise, so it is essential that the surveyor's knowledge is both comprehensive and deep. The reputation of the individual surveyor or their company, or their profession, together with their professional indemnity insurance is at stake. Surveyors should not lose that reputation which may have taken decades to build by indulging in untruths or giving evidence that cannot be supported. The surveyor is under oath, and is in court to supply technical knowledge, both fact and opinion within their area of expertise. It is important to remember that surveyors are not immune from civil liability, should expert evidence given involve gross negligence.
- d) **Presenting Evidence in the Witness Box** – Cases can be won or lost on the presentation of evidence in the witness box. To perform in a professional manner in the courtroom it is important to be well prepared and that all facts, reports and plans are available and structured so that they are easy to follow.

The surveyor will be questioned first by the client's barrister, and both should have met prior to the court date to prepare. A line of questioning will be followed, which seeks to elicit what counsel wants outlined or explained and although the witness should not be under pressure, a clear mind and total focus is required. There follows questioning by the opposing barrister, known as cross examination. A more antagonistic approach is likely to be followed. Questions need not be answered straight away. It may be useful to take a moment to focus on the question, before forming an answer. Where there is doubt about the question being asked, or about the appropriate answer, a request to repeat the question gives more time to consider what exactly is being asked and how it should be answered.

The witness should speak slowly and clearly and only answer the question asked. Both sides are presenting evidence to the judge who must make a judgement based on that evidence. If questions fall outside the surveyor's area of expertise, this should be stated, and the question should not be answered, even if a response is demanded. A defensive or argumentative attitude should be avoided. Evidence should be stated, to the best of the surveyor's knowledge in a slow professional manner. Regardless of who poses the questions, replies should be directed to the judge. To achieve this, it is useful to arrange the seat in the witness box so that it faces the judge. It is important that every question is answered honestly and accurately, even if this is to the detriment of the surveyor's client.

Judges are often impressed by accurate and up-to-date surveying methods, and by clear and detailed maps or plans prepared for the court. The inclusion of accuracy statements on these maps which outlines the methodology used may encourage the judge to choose these maps when making their determination. If measurements from deed maps were provided in the old imperial system, then the maps prepared for Court should include these measurements and their metric equivalents.

9.4 Expert Witness and Independent Expert

An Expert Witness is a person whose qualifications and expertise give an added authority to opinions or statements given or made by them within their area of expertise when acting for a party in Court. The primary function of an expert witness is to express their independent expert opinion based on the information that is provided. An expert can be employed in different capacities for example at arbitrations, tribunals, and litigation.

There are two type of witness who give sworn evidence to the court:

- a) Witnesses of fact who give evidence of fact but may not normally give opinions;
- b) Expert Witnesses who give opinion evidence within their expertise in addition evidence of facts.

It is the duty of an expert witness to assist the court as to matters within their field of expertise. This duty overrides any obligation to any party paying the fee of the expert. In most cases involving boundary disputes, surveyors will be acting as expert witnesses for one of the parties to the case.

The same rules and duties apply to an independent expert, but in these cases the independent expert is appointed by the court, or jointly by both parties.

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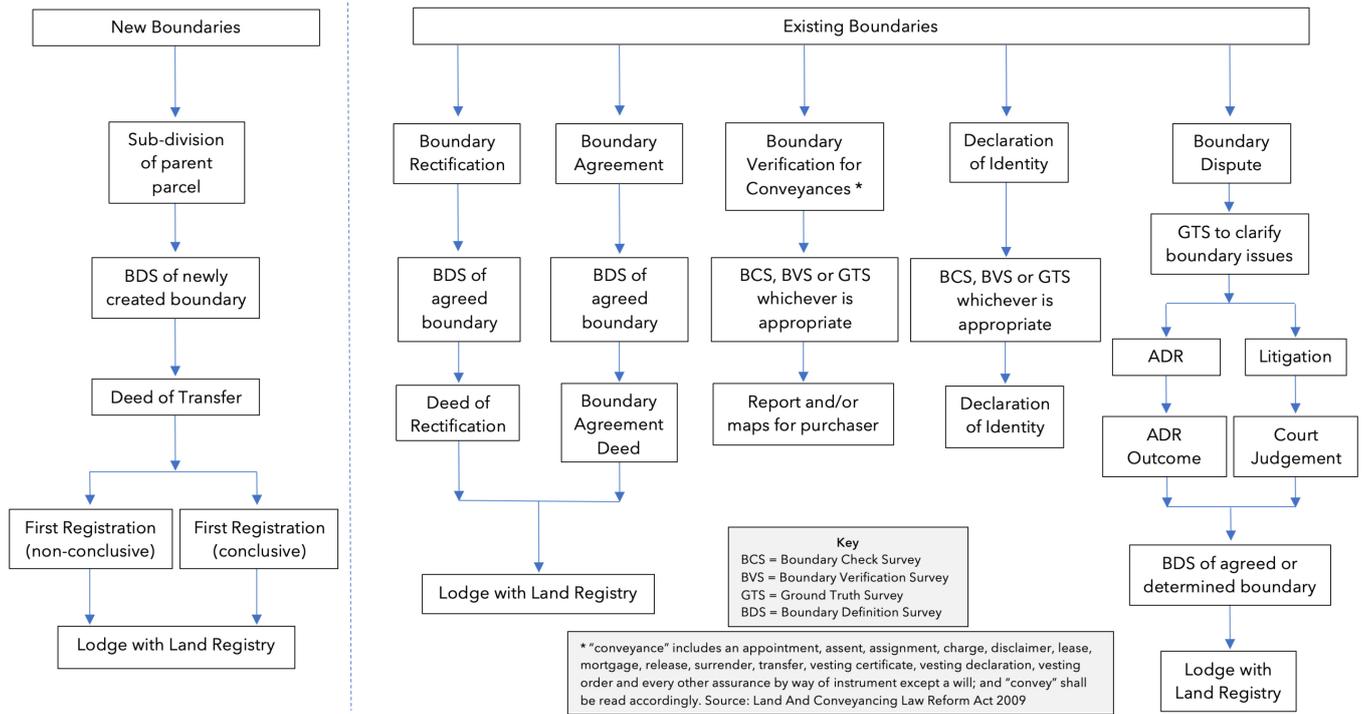
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Appendices

Appendix A – Workflow Diagram



Appendix B – Survey Accuracy* Banding Table

* Maps in digital form may be printed at any scale. However, the accuracy of the data therein is limited to the survey accuracy at which the information was first captured. Print scale and survey scale must never be conflated, for they refer to different things.

Corresponding level in RICS Banding Table	Absolute-Accuracy	Survey Type	Typical Scale	Use	Appropriate for
F	+/- 0.050m	Boundary Definition Survey & Ground Truth Survey	1:100 to 1:500	New sub-divisions, boundary agreements, and Boundary Disputes	Conclusive Boundary / Defined Boundary & non-conclusive boundary system
F	+/- 0.050m	Internal Measured Building Survey	1:100 to 1:500	Multi-storey developments	Conclusive Boundary / Defined Boundary
H	+/- 0.250m	Boundary Verification Survey	1:1000, 1:2500 & 1:5000	Checking physical versus registered property extents	Non-conclusive Boundary system
H	+/- 0.250m	Verification of legacy data of Multi-Unit Developments	1:1000 & 1:2500	Upgrading legacy data onto ITM for Multi-Unit developments	Non-conclusive Boundary system

Appendix C – Data Provenance and Governance

Item	Description	Specification	Date of capture Date of compilation Date of publication Date of copying	Data Creator	Purpose of original data creation	Provided by	Other notable information	Method of creation and spatial accuracy, if known
1	(1978) Deed of Conveyance	A plot of ground situate at XYZ St, 123	21.12.1978	ABC Engineers	Site Layout	LMO Solicitors	Poor quality and contains many tears	
2	Land Registry Index/title plan	1:2500	10.10.2010	Land Registry	Registration	Land Registry	Inconclusive as to boundaries	
3	Family photo	Historical photo	Unknown c. 2005	Unknown	Wedding	Client	A fence to the fore of the wall is visible	
4	OSI	1:2500	15.07.2014	OS	Topographical	OSI	Raster data – attribute data attached to digital file	
5	Google Earth Image	Unknown	c. 2017	Google Earth	Digital mapping	Screenshot	Looks the same as the data presented for 2010	
6	Final Grant of Planning	1:500	04.07.2006	XYZ Architects	Planning	Client	Site boundary suggests a concrete block wall as the boundary	

Note: Example shown depicts how necessary information may be clearly articulated and viewed.

Summary

A detailed table showing all relevant supporting documents will enable all parties to see and understand what information was used and relied upon to reach the final conclusions.

Appendix D – Accuracy Statements for Large Scale Ordnance Survey Ireland (OSI) Mapping

OSI Mapping Scales	OSI Accuracy Statement 2005	OSI Accuracy Statement 2006	OSI Accuracy Statement 2009	OSI Accuracy Statement 2010	OSI Accuracy Statement 2012	OSI Accuracy Statement 2013	OSI Accuracy Statement 2014	OSI Accuracy Statement 2015
1:1,000 of urban area	RMSE* = ±0.60m	89.9% within 1m and 98.3% within 2m for 5,196 points of hard detail tested	90.3% within 1m and 98.1% within 2m for 16,750 points of hard detail tested	91.0% within 1m and 98.7% within 2m for 19,920 points of hard detail tested	92.0% within 1m and 99.0% within 2m for 27,482 points of hard detail tested	93.0% within 1m and 99.0% within 2m for 32,165 points of hard detail tested	93.2% within 1m and 99.1% within 2m for 36,574 points of hard detail tested	93.2% within 1m and 99.1% within 2m for 36,929 points of hard detail tested
1:2,500 of sub-urban & peri-urban areas	RMSE = ±0.69m							
1:5,000 of rural areas	RMSE = ±1.22m	96.3% within 2.5m and 100% within 5m for 2,267 points of hard detail tested	97.2% within 2.5m and 100% within 5m for 6,974 points of hard detail tested	97.4% within 2.5m and 99.9% within 5m for 8,579 points of hard detail tested	97.6% within 2.5m and 99.9% within 5m for 13,155 points of hard detail tested	97.6% within 2.5m and 99.9% within 5m for 14,999 points of hard detail tested	97.8% within 2.5m and 99.9% within 5m for 19,044 points of hard detail tested	97.8% within 2.5m and 99.9% within 5m for 19,618 points of hard detail tested

Appendix E – Boundaries Checklist

Number	Question	Recorded Answer
1	Are the physical boundary features of the property on the ground consistent with the boundaries as shown on the Deed map?	
2	Does the Deed Map or Deed description clearly and unambiguously define the legal boundaries and determine the ownership of the physical boundary features?	
3	If the title is registered in the Land Registry, do the physical boundary features of the property on the ground generally agree with the boundaries as shown on the Land Registry map?	
4 (a)	If the title of the subject property is unregistered in the Land Registry, has the registered status of the adjoining property titles been checked?	
4 (b)	If an adjoining property title is registered, are there any inconsistencies in boundary alignments that may potentially cause difficulties in the future?	
5 (a)	Has any physical boundary feature or portion of a physical boundary feature been rebuilt, re-instated or significantly repaired since the preparation of the Deed Map? (Request SCS1 to seek that the vendors confirm this to the surveyor?)	
5 (b)	If so, how does this affect the ownership status of this portion of boundary?	
6	Are there any fixtures or buildings, placed or constructed by the respective landowners or their predecessors in title, on or supported by any portion of the physical boundary features?	
7	Are there any structures such as, roof or balcony projections, eaves, gutters, or drainpipes, which are part of a structure on a neighbouring property, overhanging the boundary?	
8	Are there any structures such as, roof or balcony projections, eaves, gutters, or drainpipes, which are part of a structure on the subject property, overhanging the boundary?	
9	Are there any watermain valves, hydrants, manholes, AJs, or other such service fittings or access points to services, on the boundary such that they are partly located in each property?	
10	Are there any agreements, formal or informal, in place with any adjoining property owner, that affect the ownership or rights concerning the physical boundary features?	
11	Is there any boundary, or part of boundary to the property, undefined by a physical feature or by reference to a physical feature?	
12	Are there any services, overhead, on the ground or below ground level, in the charge of a public utility organisation, or other third party, on the property?	
13	Are there any additional title interests, including superior interests or subordinate interests, in the property, such that the boundary of the additional interest is located within the boundary of the subject property?	
14 (a)	Are there any easements, or easements by prescription, including wayleaves or rights of way, on the property? (A wayleave to a service located outside the property may extend inside the boundaries).	
14 (b)	If so, what is the extent of such easement/s within the property boundaries?	
15	Are there any gates, doors or any such access/ exit point, located on the boundary, apparently in use or not in use, that lead directly to private property or to property that is not subject to a public right of way?	
16	Are there any outstanding issues concerning the boundaries, contentious or non-contentious, between the current owner/vendor of the subject property and any of the adjoining landowners?	

Appendix F – Template for Boundary Agreement Deed¹

Deed to Agree a Defined Boundary²⁰

We, the undersigned, being on the one part the freehold owner of property 1 and on the other part, the freehold owner of property 2, agree that the definition and location of our common boundary, or portion of our common boundary, between these two properties, as set out in the definition in Schedule A herein consisting of maps, coordinate table, and descriptions, is the agreed defined boundary between our two properties. It is further agreed that this definition as set out in Schedule A, which forms part of this Deed, shall take precedence over any other prior documents or evidence which purport to indicate the location of the legal boundary between our properties.

Property 1 - Land in the townland of....., County.....
as specified in Land Registry Folio No:Plan no....., of which I,
(Name, Address, EIRCODE) am the freehold owner.

Property 2 - Land in the townland of, County.....
as specified in Land Registry Folio No: Plan no....., of which I,
(Name, Address, EIRCODE) am the freehold owner.

Certification by Chartered Surveyor:

I,..... being a professional member of the Society of Chartered Surveyors, membership number:..... hereby certify that I have marked and surveyed on the ground and defined the agreed boundary. I further certify that both parties, having inspected the markers and physical boundary features and having examined the documents, listed in Schedule A, that form part of this Deed, have agreed that the agreed boundary between their two properties, is as defined in the maps, coordinate table, and descriptions, and such other documents contained in schedule A. The definition of this agreed boundary has been carried out in accordance with guidelines issued by the Society of Chartered Surveyors Ireland. The agreed boundary, as hereby defined, shall take precedence over any other evidence of the location of this boundary.

Schedule A

- a) Map A showing the general location of the property and the boundary.
- b) Map B indicating the defined agreed boundary signed by both parties.
- c) Table of coordinates for the defined agreed boundary.
- d) Description of the defined agreed boundary.
- e) Accuracy statement

²⁰ Brennan G, de Buitléir M, and Prendergast WP, 2014, *Towards the Registration of Defined Property Boundaries in Ireland, Inter-Professional Task Force on Property Boundaries (IPTFPB), Dublin, pp1-103*

Signed and delivered when dated as a Deed

The undersigned parties hereto hereby consent to the foregoing amendments and apply for and consent to the amendment of the Land Registry Map in the said Folios as aforesaid and confirm the boundaries shown on the said maps lodged herewith being the correct boundaries between their respective folios.

Signed: (Owner of Property 1)

(Print name of owner of Property 1)

Address: (Insert home address of landowner here)

.....

Dated:

Signed: (Owner of Property 2)

(Print name of owner of Property 2)

Address: (Insert home address of landowner here)

.....

Dated:

The above signatures were made in my presence, and I hereby attest that they were made freely and without duress.

Signed: (Witness)

(Print name of Witness)

Address: (Insert address of witness here)

.....

Dated:

Appendix G – Template for Declaration of Identity

DECLARATION OF IDENTITY

In the matter of (state address of property)

I, [insert name] Chartered Surveyor [insert qualifications], of [insert address] aged 18 years and upwards, on behalf of [insert company name] do solemnly and sincerely declare as follows:

that:-

1. I am a Fellow/Professional/Associate member of the Society of Chartered Surveyors Ireland (delete as appropriate). I have more than years (list your specific competencies here) specialising in boundary surveys. I am also familiar with the preparation and interpretation of Ordnance Survey and Land Registry maps, and am competent to research, analyse and verify the maps supplied for the property.
2. The property to which this declaration relates is the property known as (insert address and Eircode of property) (“the Property”) as delineated in red on the map attached as exhibit 1.
3. The system of land registration used in Ireland by the Land Registry is based on non-conclusive boundaries. The 2011 joint statement of the Land Registry and the OSI (see Appendix H) states that the mapping supplied by this system identifies properties, not boundaries.
4. Ancillary services which are covered up, such as piping and conduits serving the subject dwelling, cannot be conclusively confirmed by us as being entirely situate within the confines of the property or suitably connected without the benefit of opening up. All inspections were visual only and no opening up or underground investigations were carried out. Therefore, this Declaration of Identity does not extend to any underground services and or utilities that may, or may not, affect this property.
5. For the purposes of the Declaration/Certificate.
 - 5.1 I visited and inspected / carried out a ground truth survey (GTS) of the Property and its boundaries on the _____ day of _____ 2021 and I am acquainted with the property.
 - 5.2 The owner, (insert owner’s name) _____ identified the physical boundaries on site to me.
 - 5.3 The GTS of the property is supplied as exhibit 2.
 - 5.4 I have examined and reviewed the Land Registry Title Plan for Folio ***** attached as exhibit 3.
 - 5.5 I have examined and reviewed the instrument map that created Folio ***** attached as exhibit 4.
 - 5.6 I have examined and reviewed the transfer map dated ***** attached as exhibit 5.
 - 5.7 I have examined and reviewed the map attached to the Deed of Conveyance dated ***** between ***** of the first part and ***** of the second part attached as exhibit 6.

Exhibit 1 - Name of Map

List the accuracy of the map or state unknown

(Each map should be individually signed and have a unique number related to this Declaration of Identity)

Declaration of [insert name] on behalf of [insert name of company]
for
[insert name], Practicing Solicitor, & Company name

*Note that the declaration that the property is comprised within the lands delineated on the conveyance/transfer map is an unqualified declaration, despite the subsequent reference to the quality or otherwise of deed, Land Registry or OSI mapping used. In making such an unqualified declaration the surveyor must be very sure that what is being declared is factual, otherwise he/she may be held liable for any issue arising. Qualification of the declaration, in any way, is not legally acceptable, so great caution is advised.

Appendix H - Joint Statement in January 2011 by Ordnance Survey Ireland and the Land Registry on Mapping used for Land Registration in Ireland

The Property Registration Authority (Land Registry) and Ordnance Survey Ireland (OSI) enjoy a very close working relationship. The Land Registry utilises Ordnance Survey Ireland's topographic mapping to cross-reference and associate their boundary information. This forms the basis of all Land Registry digital map data.

Ordnance Survey Ireland and Land Registry have compiled the information below to help customers understand their respective roles.

Ordnance Survey Ireland's Role

Ordnance Survey Ireland is the national mapping agency of Ireland. It is the State Agency responsible for the official, definitive surveying and topographic mapping of the Republic of Ireland. As this mapping is topographic, it only represents the physical features on the ground at the time of survey. The features shown must fall within the specification for the survey scale and within agreed accuracy tolerances.

OSI maps never indicate legal property boundaries, nor do they show ownership of physical features. Although some property boundaries may be coincident with surveyed map features, no assumptions should be made in these instances and consequently it is not possible to identify the position of a legal property boundary from an OSI map.

OSI has a continuous mapping revision programme for the whole of the Republic of Ireland. Changes that have occurred on the ground since the property was registered may result in differences between later OSI map editions and the mapping used by the Land Registry.

Contact Ordnance Survey Ireland

Ordnance Survey Ireland is unable to answer questions regarding legal property boundaries or interpret the mapping in your title plan. However, if you have questions regarding their mapping you can:

- E-mail custserv@osi.ie
- Call their LoCall number on 1890 67 46 27
- Or write to:
Customer Service Centre,
Ordnance Survey Ireland,
Phoenix Park,
Dublin 8.

Property Registration Authority

The main functions of the PRA are to manage and control the Registry of Deeds and the Land Registry and to promote and extend the registration of ownership of land.

Land Registry's Role

The Land Registry was established in 1892 to provide a comprehensive and secure system of land registration. When property title is registered in the Land Registry the Deeds are filed in the Registry and all relevant particulars concerning the property and its ownership are entered on Folios which form the Registers maintained in the Land Registry. In conjunction with Folios the Land Registry also maintains Land Registry maps. Both Folios and maps are maintained in electronic form. Land Registry maps (digital vector data) are based on Irish Transverse Mercator (ITM) coordinate reference system topographic maps that are supplied to the Registry in digital vector form by Ordnance Survey Ireland. Published scales are 1/5,000 rural, 1/2,500 urban/rural, 1/1,000 urban. The Land Registry represents the extent of all registered land by reference to OSI topographic map data. Where a boundary of the land is not defined by a physical feature on the OSI map, the Land Registry digitises it from either the electronic or paper map(s) lodged by applicants for registration purposes. The word "boundary" has no special meaning in law but in land ownership it is understood in two ways:

The Physical Boundary:

The Land Registry identifies properties not boundaries and never shows ownership of individual boundary structures such as walls, fences and hedges etc. It should also be noted that Deeds rarely deal with such matters.

Non-conclusive Boundary System

The boundary system adopted by the Land Registry under the Registration of Title Act, 1964 is known as a non-conclusive boundary system. The non-conclusive provision dispenses with the need for determining the exact location of title boundaries when defining the extent of registered properties and the ownership of the physical features which mark the limits of a property is left undetermined. In the case of boundaries located within buildings, the exact line or plane of the title boundary is also left undetermined.

The non-conclusive boundary system will not indicate whether a title boundary includes a hedge or a wall and ditch or runs along the centre of a wall or fence or runs along its inner or outer face or how far it runs within or without it or whether or not the land registered includes the whole or any portion of an adjoining road or stream. However, the location of the physical features within which the title boundary lies, or the points between which an undefined title boundary runs, must be accurately defined by the applicant on the map lodged for registration within the limitations of the scale of the application map.

Official copies of the Registry Map can be obtained by ordering any of the following:-

- Special Registration Map
- Title Plan
- Official Map Search

Each of the above map products are generated from the Land Registry digital vector map and includes some surrounding OSI topographic detail. Official copies of Land Registry maps are subject to the limitations of scale and survey accuracy of both:

- OSI maps on which they are based
- The application maps lodged for registration purposes

Where boundaries have been transferred to a larger scale or to a different map series, whether on paper or in a digital environment, measurements must not be expected to give a degree of accuracy greater than that of the smaller scale or older map series. Since the commencement of land registration in 1892, almost all registrations were recorded by reference to the topographic detail shown on OSI published map scales. OSI Cassini/County Series and Irish Grid published scales in the paper system were 1/10,560, 1/2,500 1/1,000 and some urban areas were published at 1/1,250 and 1/1,056, (both 1/1,250 and 1/1,056 were enlarged by OSI from 1/2,500 mapping). Accuracy of the Land Registry's boundary data is, accordingly, limited to the survey accuracy and scale of the source map originally lodged and upon which registration was based. The Land Registry is unable to tell you precisely where a property boundary is located.

Questions about Land Registration

Land Registry publishes a number of public guides about land registration which can be viewed or downloaded from its website at <http://www.landdirect.ie> or obtained free of charge from any Land Registry office. The website also has a 'frequently asked questions' section.

* Retrieved from <https://osi.ie/about/key-documents/joint-statement-of-osi-and-pra/> on 29/09/2021

Appendix J – Definition of Terms for Area Measurement of Land

These definitions are supplied to provide consistency and clarity when measuring and reporting land in a manner similar to the development and publication of the **International Property Measurement Standards** for industrial, office, retail and residential buildings in the last decade. Currently there is no similar standard for land areas and, this is an attempt to initiate the development of a standardised approach in that regard.

Although Geomatics professionals are the appropriate professionals for measuring and reporting land areas, it was felt that the adoption of a Irish standard will require the involvement of other professions, such as other SCSi professional groups and beyond.

Conditions:

Conditions a, b & c should apply in all cases to measurements of GSA, SA and NSA.

- a) All measurements must be reduced to the ITM spatial reference system, for compatibility with the map-based official State data sources i.e., OSI & Land Registry.
- b) In circumstances where there are one or more plots, in separate ownership each must, for the avoidance of doubt, be clearly distinguished and stated separately.
- c) In circumstances where the legal boundaries, physical boundary features, and Land Registry Folio File Plan delineations do not coincide, and there are areas within the plot not covered by title and or registration or fall outside of the physical boundary features and are covered by title and or registration these must be clearly distinguished and stated separately.

Definitions:

Gross Site Area (GSA)	The total area of the site contained within the legal boundary inclusive of any public highway, (unless the highway is within separate ownership) enclosed by extending the boundaries of the site up to the centre of the public highway, if applicable.
Site Area (SA) ²¹	The total area of the site contained within the legal boundary exclusive of any public highway (unless the highway is within separate ownership).
Net Site Area (NSA) ²²	The total area of the site contained within the legal boundary exclusive of any public highway, rivers and any such things specified by planning or legally defined e.g. zoning, sterilisation, or right of way, etc,
Site Depth (SD)	The measurement of a site from front to rear boundaries (maximum, minimum or average, for the avoidance of doubt whatever is used must be clearly stated), i.e. to the physical boundary facing the road.
Site Width (SW)	The measurement of the width of a site along the physical boundary facing the road (road frontage).
Site Ratio (SR)	The site ratio of Gross Site Area (GSA) to Net Site Area (NSA) where Net Site Area is expressed as one, e.g. 3:1

²¹ Gross site area, less public highway

²² Area of the site that may be utilised freely (no legal or planning restrictions)

Plot Ratio (PR) ²³	<p>Plot ratio is a tool to help control the bulk and mass of buildings. It expresses the amount of floor space in relation (proportionally) to the site area, and is determined by the gross floor area of the building(s) divided by the site area. Plot ratio will apply to both new buildings and extensions to existing buildings.</p> <p>The gross floor area is the sum of floor space within the external walls of the building(s), excluding basements but including plant and tank rooms and car parking areas above ground level. In the case of a group of buildings with a common curtilage, the floor areas will be aggregated. The site area includes only such land as lies within the curtilage of the related building.</p> <p>Plot ratios can determine the maximum building floorspace area or volume on a given site, but on their own cannot determine built form. The same area or volume can be distributed on a site in different ways to generate very different environments.</p> <p>Consequently, plot ratio standards need to be used in conjunction with other development control measures, including site coverage, building height, public and private open space, the standards applied to residential roads, and parking provision.</p>
Site Coverage (SC) ²⁴	<p>Site coverage is a control for the purpose of preventing the adverse effects of overdevelopment, thereby safeguarding sunlight and daylight within or adjoining a proposed layout of buildings.</p> <p>Site coverage is the percentage of the site covered by building structures, excluding the public roads and footpaths.</p> <p>Site coverage is a tool particularly relevant in urban locations where open space and car parking standards may be relaxed.</p> <p>As with plot ratio above, higher site coverage may be permitted in certain circumstances such as:</p> <ul style="list-style-type: none"> • Adjoining major public transport termini and corridors, where an appropriate mix of residential and commercial uses is proposed • To facilitate comprehensive redevelopment in areas in need of urban renewal • To maintain existing streetscape profiles • Where a site already has the benefit of a higher site coverage

When to use:

Land measurement	SA is a basis for calculating land areas for taxation, grants and subsidies.
Planning	SA & NSA is a basis for land development and SD, PR is for general application in master planning & planning.
Conveyancing	GSA is a basis for conveyancing.

For the avoidance of doubt, whatever area is used must be clearly stated.

²³ <https://www.dublincity.ie/dublin-city-development-plan-2016-2022/16-development-standards/165-plot-ratio>

²⁴ <https://www.dublincity.ie/dublin-city-development-plan-2016-2022/16-development-standards/166-site-coverage>

Appendix K – Land Registry Form 96

Land Registry Form 96

**Application to inspect or obtain a copy of an Instrument
under Rule 159 of the Land Registration Rules, 2012**



Details:

1. Folio Number: COUNTY:

Registered Owner(s):

Instrument Number:

Document/Deed Sought:

Application by:

2. Name:

Address:

Reference: email Address:

Entitlement:

3. I am entitled to inspect/obtain a copy of the Instrument / Document scheduled above under the provisions of Rule 159 of the Land Registration Rules as indicated below.
Please see attached guidelines. *(Tick the section which is applicable)*

I am the (personal representative of the) registered owner of the abovementioned folio *(See Note 1)*

I am the solicitor for the (personal representative of the) registered owner of the abovementioned folio *(See Note 3)*

I am authorised by the (personal representative of the) registered owner of the abovementioned folio *(See Note 2)*

I am authorised by an order of the court

I am the registered owner of the charge (a copy of which is sought) registered on the abovementioned folio

I am the party entitled to the benefit of the burden (a copy of the deed creating which is sought) registered on the abovementioned folio

I was a party to the deed scheduled above, a copy of which is sought

I am a person who would be entitled to inspection of a document relating to property, if its ownership was not registered and the document was in the possession of the person by law entitled to the custody thereof

The judgment mortgage scheduled above (a copy of which is sought) remains uncancelled on the folio

The *lis pendens* scheduled above (a copy of which is sought) remains uncancelled on the folio

I am devisee/beneficiary under a will or intestacy of a former registered owner of the abovementioned folio or his/her successor in title

I lodged the instrument under Rule 130(5)

I am the owner of an unregistered servient tenement

I am entitled to the benefit of a right created by an instrument filed under Rule 130(5)

Under Rule 159(9) I apply to the Authority to permit me inspect the document on the following grounds:

4. Application: **Application by Solicitor**

I/We the Solicitor for the registered owner(s) or his/her personal representative(s) request

 to inspect the issue of a copy of

the Instrument/Document scheduled at item 1 above to me/us.

Signed (by individual Solicitor): _____

Name of firm: _____

Dated this the ____ day of _____ 20____

 Application by Registered Owner/Personal RepresentativeI as registered owner **or** his/her personal representative, request to inspect the issue of a copy of

the Instrument/Document scheduled at item 1 above to me/us.

Signature of Registered Owner/Personal Representative: _____

Signature of Witness: _____

Address of Witness: _____

Dated this the ____ day of _____ 20____

 Application by Other Party (please specify)

Signature of Witness: _____

Address of Witness: _____

Dated this the ____ day of _____ 20____

Official Use OnlyDate of Receipt Fees: Inspection - €5.00
Copy of all/part Instrument - €40.00Proof of identity produced: Please see our requirements as set out in the PRAI Identification Form - available at:
www.prai.ie/eng/Forms/Identification_Form.pdf

Note (1) - Where the applicant is the registered owner or his/her personal representative, the signature must be attested and evidence of identity and evidence of permanent address must be presented or lodged.

Note (2) - Where the application is by a party, other than a solicitor, acting with the authority of the registered owner, the application must contain an authority under signature of the registered owner and attested. Evidence of identity and evidence of permanent address of the applicant must be presented or lodged.

Note (3) - Where a solicitor is giving authority to another party e.g. law searcher or other party to receive a copy Instrument on their behalf, the application should state that (a) they are the solicitor for the registered owners and (b) to whom the copy instrument or part thereof is to issue.

Note (4) - The application must identify the instrument number and indicate whether access is being sought to all or a specific part of the instrument.

Note (5) - Any letter of authority must specify whether authorised access is to all of an instrument, a specific deed(s) or specific parts of the Instrument. The letter of authority should be an original.

Note (6) - Notice may be served on the registered owner if considered appropriate by the Authority.

Rule 159 Land Registration Rules - Inspection of documents

(1) The registered owner of property and any person authorised by such owner, or by an order of the court or by these Rules, but no other person, may inspect a document filed in the Registry on a dealing or transaction with the property of the owner.

(2) Any person who would be entitled to inspection of a document relating to property, if its ownership was not registered under the Act, and the document was in the possession of the person by law entitled to the custody thereof, shall be entitled to inspect the document, if filed in the Registry.

(3) An affidavit of judgment deposited in the Registry pursuant to the Judgment Mortgage Ireland Act, 1850, as amended by the Act, or an application for registration of a judgment mortgage under Rule 110 may be inspected by any person so long as notice of its deposit or the entry of the judgment mortgage is uncanceled in a register.

(4) A memorandum of a lis pendens, bond, recognisance or inquisition filed in the Registry may be inspected by any person so long as the entry relative to it remains uncanceled in a register.

(5) An application, assent, affidavit, or transfer, made by a personal representative of a deceased owner of property that vested in the personal representative may be inspected by a devisee or other person, except a creditor, having an interest in the property under the owner's will, or, where the owner died intestate, by a person in whom a beneficial interest in the property devolved on the intestacy, or by a person who satisfies the Authority that he/she is the successor in title of one of such persons.

(6) An instrument filed in the Registry under Rule 130(5) may be inspected by the person by whom it was lodged or by any person who satisfies the Authority that he/she is entitled to the benefit of a right created by the instrument.

(7) An instrument filed in the Registry under Rule 46 may be inspected by any person who satisfies the Authority that he/she is the owner or person(s) entitled to be the owner of an unregistered servient tenement property, over which a right was registered as appurtenant to a dominant tenement property under Section 49A of the Act, on the production of such proofs as may be directed by the Authority.

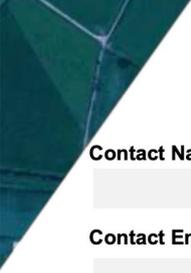
(8) Any person entitled to inspect a document filed in the Registry may obtain a copy of it.

(9) The Authority may, in special circumstances and on such terms as it shall think fit, permit a person to inspect, or obtain, a copy of a document filed in the Registry.

(10) An application to inspect or obtain a copy under this Rule shall be made in Form 96

(11) Before allowing inspection of a document by a person claiming under Rule 159, the Authority may make such inquiries and give such notices as it may think fit. Notice under this rule shall be in Form 97

Appendix L – Ordnance Survey Ireland Data Quality Form



Data Quality Form



<p>Contact Name</p> <input style="width: 90%; height: 20px;" type="text"/>	<p>Eircode (if known)</p> <input style="width: 90%; height: 20px;" type="text"/>
<p>Contact Email</p> <input style="width: 90%; height: 20px;" type="text"/>	<p>Contact Phone Number to facilitate possible site visit (if required)</p> <input style="width: 90%; height: 20px;" type="text"/>
<p>Contact Phone Number</p> <input style="width: 90%; height: 20px;" type="text"/>	<p>Location of Mapviewer issue - ITM co-ordinates or</p> <input style="width: 90%; height: 20px;" type="text"/>
	<p>Web link to perceived map error here</p> <input style="width: 90%; height: 20px;" type="text"/>

Details of Mapviewer Issue

Please answer the questions below, giving as much detail as possible about the missing or incorrectly represented map feature.

<p>Please indicate in what OSI product or Mapviewer did you see this issue?</p> <input style="width: 95%; height: 80px;" type="text"/>	<p>Description and measurement of discrepancy</p> <input style="width: 95%; height: 80px;" type="text"/>
<p>What type of map feature is it?</p> <p> <input type="checkbox"/> Building <input type="checkbox"/> Road <input type="checkbox"/> Fence <input type="checkbox"/> Other </p> <p>If other was selected in the list, please specify</p> <input style="width: 95%; height: 80px;" type="text"/>	<p>Discrepancy capture method</p> <input style="width: 95%; height: 80px;" type="text"/>
<p>Is this feature missing or incorrectly represented on the map?</p> <p> <input type="checkbox"/> Missing <input type="checkbox"/> Incorrectly represented </p>	<p>Scale / date of survey and contact details of surveyor (if applicable)</p> <input style="width: 95%; height: 80px;" type="text"/>
<p>Additional Comments</p> <input style="width: 95%; height: 40px;" type="text"/>	

Appendix M – Court of Appeal Judgement on Priority of Boundary Evidence

Ms Justice Costello of the Court of Appeal delivered a judgement on 20th March 2019²⁵ regarding an appeal against the judgement of Mr Justice O'Connor of the High Court on 8th December 2016²⁶. The case involved Sean & Pauline Abraham as plaintiffs and Oakley Park Developments Ltd as defendants.

The judgement reaffirmed the following:

- a) The primary source for defining a boundary are the Deeds in the chain of title and the intention of the parties as expressed in these Deeds is paramount.
- b) The plan attached to the Deed (if there is one) is usually for the purposes of identification only. It cannot normally be relied upon as delineating precise boundaries.
- c) A Deed Map may take priority over the verbal description in the Deed where the parcels clause provides that the map is to determine the nature and extent of the land in question, such as “*more particularly delineated on the map annexed hereto and thereon surrounded by a red verge line*”.
- d) If the Deed or Deed Map is clear and unambiguous, a mismatch between the clear Deed or Deed Map and the actual physical features on the ground is not a reason in itself to disregard the title documents, and determine the position of a boundary by reference to the topographical features alone.
- e) Any conflict between dimensions set out in figures on a Deed Map and those calculated by scaling off the map, may be resolved by reference to topographical features which existed when the conveyance or transfer was executed.
- f) In any case where the boundary is not stated to be conclusive or defined, evidence other than the Register or the Registry map is admissible to determine the correct boundary and extent of the land.
- g) If a conveyance follows the line of the physical features on an Ordnance Survey map, it follows that the property boundaries follow the physical features as they existed when the Ordnance Survey map was produced.
- h) If a Deed Map is prepared by reference to an Ordnance Survey map, the topographic features on the map are surveyed to the centre line of the topographic feature, so if the area of the land is calculated by reference to the Ordnance Survey map, the boundaries are thereby also established.
- i) The Land Registry map identifies properties not boundaries, meaning neither the description of land in a Register nor its identification by reference to a Land Registry map is conclusive as to the boundaries or extent of the land.
- j) There is no contractual duty on a purchaser to satisfy himself as to the boundaries of the land in a sale, but if purchasers fail to satisfy themselves as to the boundaries of the lands in sale, they do so at their own peril.
- k) Land transfers are subject to caveat emptor “let the buyer beware”, and thus the importance of a detailed survey cannot ever be overstated for it is the only way to bring true clarity to a situation that may otherwise contain many unknown errors or omissions.
- l) Since the maximum distance between the location of the disputed boundaries was only 1.5m (less than the stated accuracy of the OSI rural place map at +/-2.0m), a high-quality ground truth survey was necessary to eliminate uncertainty and bring clarity to the situation.

In summary, the priority of evidence for boundaries is as follows:

- a) The primary evidence are the Deeds in the chain of title.
- b) The secondary evidence are the physical boundary features on the ground, which can take precedence over the Deeds if they are longstanding for an extended period of time.
- c) The tertiary evidence is the Land Registry Title map/Folio File Plan.

²⁵[2019] IECA 87

²⁶[2016] IEHC 790

Appendix N – Ordnance Survey Ireland Administrative Boundaries Mereing Annotations

Annotations useful for describing property boundaries are shaded

Object	Term	Annotation
Administrative Boundary	Barony	BY
Administrative Boundary	Electoral Division	ED
Administrative Boundary	Parish	P
Administrative Boundary	Townland	TD
Bank	Bank	B
Bank	Centre of Bank	CB
Bank	Base of Bank	BB
Bank	Top of Bank	TB
Bank	1.52m Top of Bank	1.52mTB
Bank	Face of Bank	FB
Bank	Three Foot Face of Bank	3ftFB
Bank	Four Foot Face of Bank	4ftFB
Bank	Six Foot Face of Bank	6ftFB
Bank	Twelve Foot Face of Bank	12ftFB
Bank	Right Face of Bank	RFB
Bank	Left Face of Bank	LFB
Basin	Basin	B
Baulk	Baulk	B
Baulk	Edge of Baulk	EB
Bridge	Bridge	B
Bridge	Centre of Bridge	CB
Building	Building	B
Building	Face of Building	FOB
Canal	Canal	C
Canal	Centre of Canal	CC
Canal	Edge of Canal	EC
Channel (Tidal)	Centre of Channel at Low Water (Eng)	CCLW

Channel (Tidal)	Side of Channel At Low Water (Eng)	SCLW
Cliff	Cliff	C
Cliff	Top of Cliff	TC
Ditch	Ditch	D
Ditch	Top of Ditch	TD
Ditch	Double Ditch	DD
Ditch	Face of Ditch	FD
Ditch	Six foot Face of Ditch	6ftFD
Ditch	Track of Ditch	TKD
Drain	Drain	D
Drain	Centre of Drain	CD
Drain	Track of Drain	TD
Drain	Three Foot Face of Drain	3ftFD
Drain	Six Foot Face of Drain	6ftFD
Drain	Edge of Drain	ED
Drain	Six Foot Track of Drain	6ftTKD
Drain	Face of Drain	FD
Fence	Fence	F
Fence	Face of Fence	FF
Fence (Double)	Face of Double Fence	FDF
Fence	Centre of Fence	CF
Fence	Track of Fence	TKF
Fence	Three foot Face of Fence	3ftFF
Fence	Four foot Face of Fence	4ftFF
Fence	Five foot Face of Fence	5ftFF
Fence	Six foot Face of Fence	6ftFF
Fence	Centre of Double Fence	CDF
Gate	Centre of Gate	CG
Hedge	Hedge	H
Hedge	Centre of Hedge	CH

Hedge	Root of Hedge	RH
Hedge	1.22 metres Root of Hedge	1.22mRH
Hedge	Three Foot Root of Hedge	3ftRH
Hedge	Six Foot Root of Hedge	6ftRH
Hedge	Right Root of Hedge	RRH
Hedge	Left Root of Hedge	LRH
Lake	Lake	L
Lake	Edge of Lake	EL
Lake	Centre of Lake	CL
Lockspit	Lockspit	L
Lockspit	Centre of Lockspit	CL
Object no longer exists or has moved	Defaced	DEF
Pond	Centre of Pond	CP
Railway	Railway	R
Railway	Centre of Railway	CW
River	River	R
River	Centre of River	CR
River	Side of River	SR
River	Edge of River	ER
River	Centre of Old Course of River	COCR
River	Track of Old Course of River	TKCOCR
River (containing island)	Centre of River East Side of Island	CRE
Road	Road	R
Road (kerb or footpath present)	Edge of Kerb	EK
Road (no footpath present)	Side of Road	SR
Road	Centre of Road	CR
Road (Grass)	Centre of Track	CTk
Road (Grass)	Side of Unfenced Track	STk
Road (Grass)	Centre of Old Course of Road	COCR
Rock	Rock	R

Rock	Face of Rock	FR
Slope		S
Slope	Top of Slope	TS
Slope	Base of Slope	BS
Stream	Stream	S
Stream	Centre of Stream	CS
Stream	Centre of Old Course of Stream	COCS
Stream	Centre of Covered Stream	CCS
Stream	Edge of Stream	ES
Stream	Face of Stream	FS
Stream	Side of Stream	SS
Stream	Track of Stream	TKS
Stream	Track of Old Course of Stream	TKCOCS
Stream	Four foot Side of Stream	4ftSS
Stream	Six Foot Side of Stream	6ftSS
Wall	Wall	W
Wall	Double Wall	DW
Wall	Face of Wall	FW
Wall	Centre of Wall	CW
Wall	Centre of Double Wall	CDW
Wall	Three Foot Face of Wall	3ftFF
Wall	Four Foot Face of Wall	4ftFF
Wall	Five Foot Face of Wall	5ftFF
Wall	Six Foot Face of Wall	6ftFF
Wall	Track of Wall	TKW
Water Mark (High)	High Water Mark	HWM
Water Mark (Low)	Low Water Mark	LWM

Appendix O – Relevant Legislation and Rules for Land Registry

Registration of Title Act 1964 as amended and consolidated by the Registration of Title Act 2006 (12/2006), s. 61, S.I. No. 511 of 2006.

Registry maps.

84. (1) Provision may be made by general rules—
- (a) for identifying on maps (in this Act referred to as 'registry maps') land whose ownership has been registered under this Act, and
 - (b) for reference in the register to those maps.
- (2) (a) For the purposes of such registration—
- (i) the Registrar, in respect of the period before the commencement of section 61 of the Registration of Deeds and Title Act 2006, is deemed to have had power in any particular case to adopt any map which the Registrar considered satisfactory, and
 - (ii) on such commencement, the Authority may in any particular case adopt any map which it considers satisfactory.
- (b) For the purposes of this Act and the repealed enactments, any map so adopted is, and is deemed always to have been, a registry map.
- (3) A registry map shall be in such form, including an electronic or other non-legible form which is capable of conversion into a permanent legible form, as may be prescribed.
85. (1) Registered land shall be described and identified by reference to the registry maps concerned in such manner as may be prescribed.
- (2) Except as provided by this Act, neither the description of land in a register nor its identification by reference to a registry map is conclusive as to its boundaries or extent.

86. Where the boundaries of any registered land have been ascertained and defined by any conveyance executed by any of the Commissioners for Sale of Incumbered Estates in Ireland, or of the judges of the Landed Estates Court, or of the Land Judges, under the provisions of any of the Landed Estates Court Acts, or of the Landlord and Tenant (Ireland) Act, 1870, or by any conveyance or vesting order executed or made by the Land Commission under any of the provisions of the Land Purchase Acts, in every such case the Authority may, if it thinks fit, after the prescribed notices, enter such boundaries on the register as conclusive, and they shall thereupon be conclusive upon all parties.
87. (1) The Authority may at any time, on the application of the registered owners of adjoining lands, or of the registered owner of land and an owner of adjoining unregistered land, and on the prescribed conditions being complied with, settle and enter on the register as conclusive the boundaries between those lands or any parts thereof, with such alterations, if any, as may from time to time be agreed upon.
- (2) An entry in pursuance of this section shall be conclusive only as between the parties to the application and their respective successors in interest, and shall not operate to confirm the title to the lands the boundaries whereof are settled.
88. (1) On the transfer of part of any registered land, the Authority, on the prescribed conditions being complied with, may enter on the register as conclusive the boundaries between the part transferred and the part not transferred.
- (2) If on any transfer of registered land any question arises as to the boundaries or extent of the land transferred, the Authority shall, on the application of the transferor or transferee, have jurisdiction to decide the question as between them, and for that purpose may, if it seems expedient, adopt the decision of any person agreed on by them or appointed by the Authority.

Land Registration Rules 2012-2021

Entry of conclusiveness of a boundary of property

8. (1) The description of property in the registers shall be by reference to the names and denominations recorded by Ordnance Survey Ireland and may, where the Authority permits, include any other geographical or locational information.
- (2) Neither the description of property in a register nor its identification by reference to a registry map is conclusive as to its boundaries or extent and a note to this effect shall be entered on the register.
- (3) Where areas of property are recorded, such areas are not conclusive
- (4) The description of property shall be revised by the Authority from time to time and made conformable with the description on the registry map as and when revised.

139. Every entry in the register of the conclusiveness of a boundary shall be made by stating therein the physical boundary of the property along a specified line on the registry map or identified by any geographical or locational information and the part of it that is the ascertained line of the boundary, as, for instance, that the face or centre of the fence or wall or the centre or a specified side of a stream or drain along the line shown on the map is the boundary and is conclusive as between the adjoining owners, or as against all persons, as the case may be.

Entry of boundary ascertained by Land Judge's conveyance

140. A boundary defined by one of the instruments specified in Section 86 of the Act shall not be entered in the register as conclusive unless the facts that enable it to be defined

in the register in accordance with the foregoing rule may be ascertained from the instrument and unless notice of the proposed entry has been given to the owners of the adjoining property and no objection has been received within the time limited by the notice.

Entry of boundary by agreement

141. (1) An application by owners of adjoining property for entry in the register of the boundary between their property, or part of it, shall be made by lodging in the Registry

(a) a plan drawn on an application map showing the land adjoining the boundary to be defined and indicating the site of the boundary by a line in colour;

(b) a consent in writing by the owners referring to the plan and stating in the manner prescribed by Rule 139 the physical boundary along the line indicated on the plan and the part of it that they agree is the boundary.

(2) Where an owner who is a consenting party is the owner of unregistered land, proof shall also be given that he/she is the owner within the meaning of Section 89 of the Act who is authorised by that section to consent.

Settlement of boundary on transfer

142. The boundary between registered property transferred by a registered owner and other registered property of which he/she is the registered owner may be entered in the register as conclusive on lodgement in the Registry of consent by the transferor and transferee in the terms specified in the foregoing rule.

Appendix P – Example of Boundary Definition Deed and Maps for Two Newly Defined Boundaries *

(*The examples provided do not relate to any real land parcel and the coordinates displayed are for illustrative purposes only)

Defined Boundary Deed

We, the undersigned, being on the one part the freehold owner of property 1 and on the other part, the freehold owner of property 2, agree that the definition and location of our common boundary, or portion of our common boundary, between these two properties, as set out in the definition in Schedule A herein consisting of maps, coordinate table, and descriptions, is the agreed defined boundary between our two properties. It is further agreed that this definition as set out in Schedule A, which forms part of this Deed, shall take precedence over any other prior documents or evidence which purport to indicate the location of the legal boundary between our properties.

Property 1 - Land in the townland of....., County.....

as specified in Land Registry Folio No:Plan no....., of which I,
(Name, Address, EIRCODE) am the freehold owner.

Property 2 - Land in the townland of, County.....

as specified in Land Registry Folio No: Plan no....., of which I,
(Name, Address, EIRCODE) am the freehold owner.

Certification by Chartered Surveyor:

I,..... being a professional member of the Society of Chartered Surveyors, membership number:..... hereby certify that I have marked and surveyed on the ground and defined the agreed boundary. I further certify that both parties, having inspected the markers and physical boundary features and having examined the documents, listed in Schedule A, that form part of this Deed, have agreed that the agreed boundary between their two properties, is as defined in the maps, coordinate table, and descriptions, and such other documents contained in schedule A. The definition of this agreed boundary has been carried out in accordance with guidelines issued by the Society of Chartered Surveyors Ireland. The agreed boundary, as hereby defined, shall take precedence over any other evidence of the location of this boundary.

Schedule A

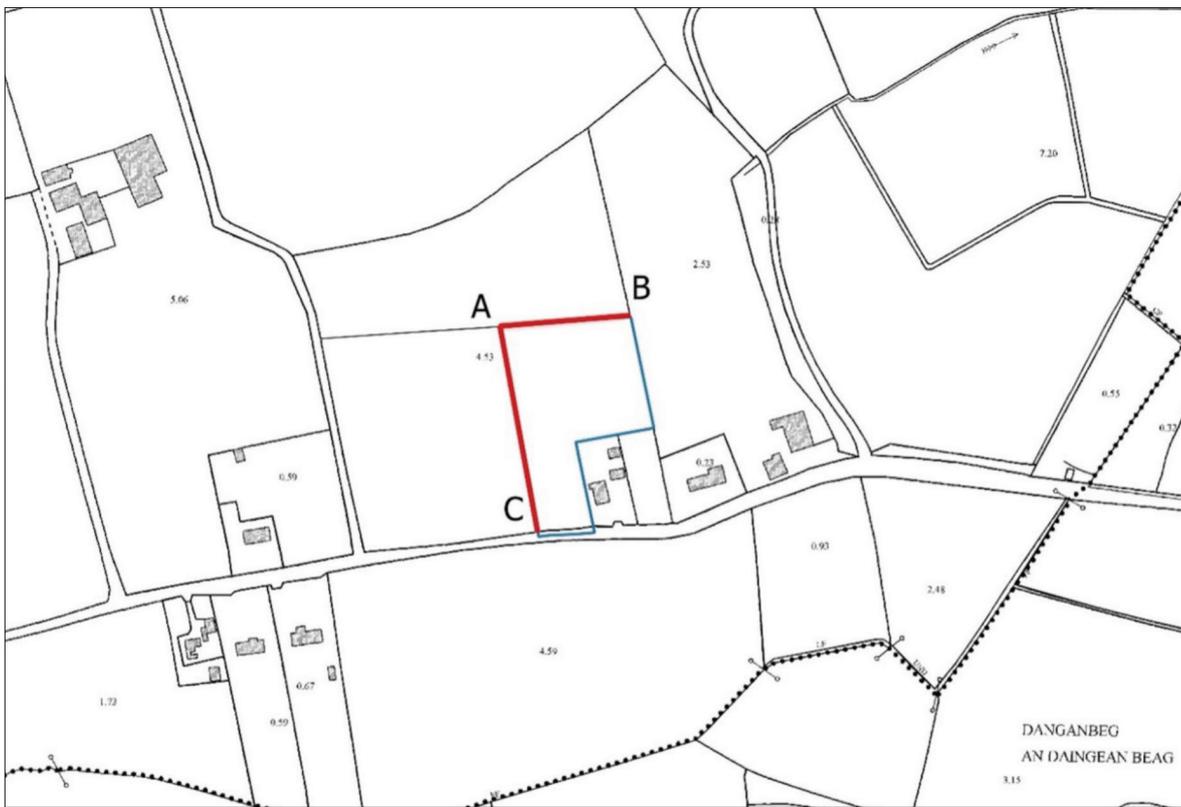
- a) Map A showing the general location of the property and the boundary.
- b) Map B indicating the defined agreed boundary signed by both parties.
- c) Table of coordinates for the defined agreed boundary.
- d) Description of the defined agreed boundary.
- e) Accuracy statement

Map A – General location of the defined boundary

County
Barony of
Townland of
Between Folio and
OSI map sheet number, at a scale of 1:2500

The general location of the boundary being defined in this schedule is shown in red on the map below and labelled B-A-C and is more clearly defined on map B, coordinate table, and description, outlined later in this schedule A.

Map A



Map B – showing the detail of the defined agreed boundary, signed by both parties and witnessed

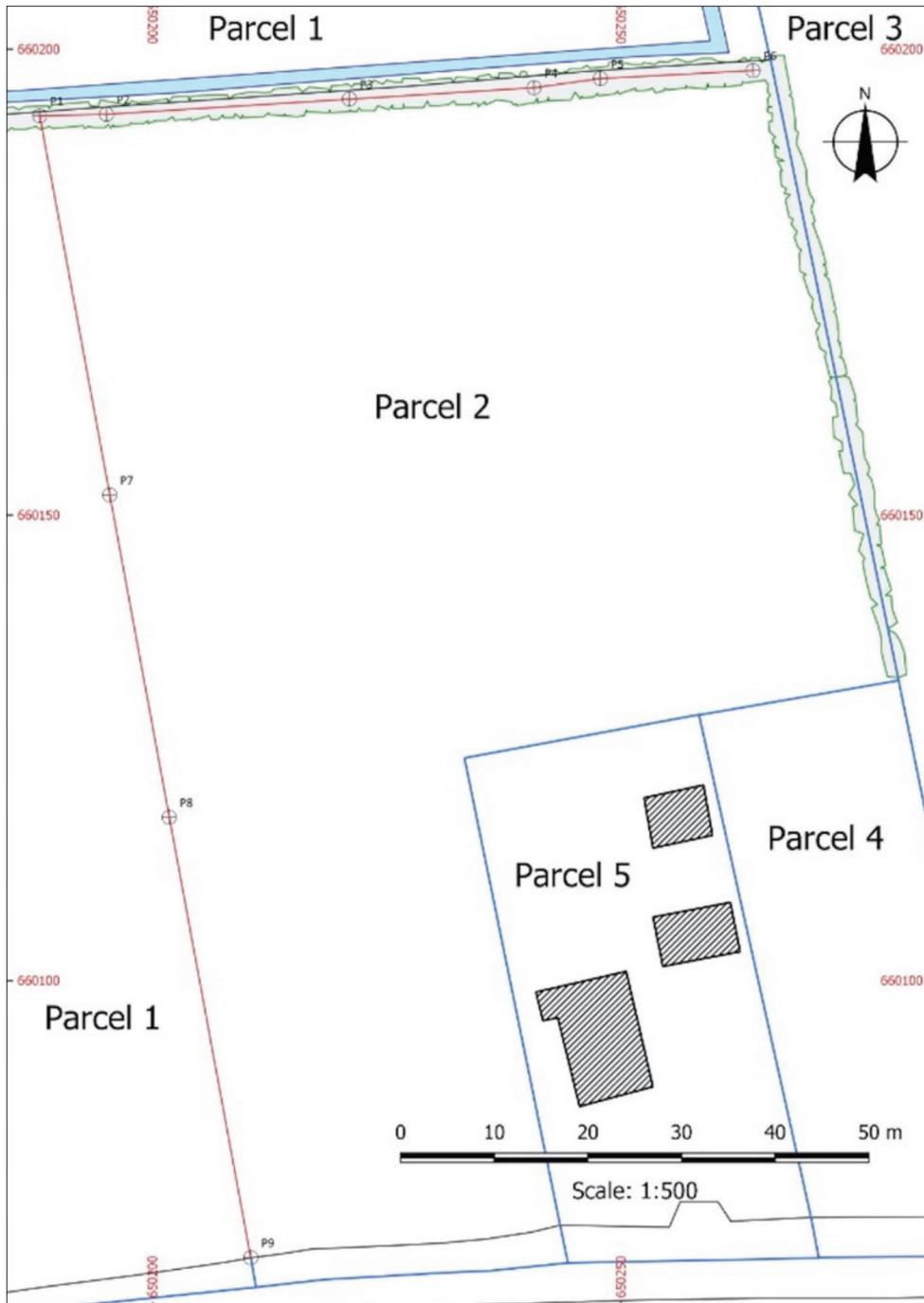


Table of ITM15 coordinates for the two defined boundaries

Segment	Point ID	Marker No	Easting	Northing
Northern	P1	7	650188.200	660192.700
Northern	P2	9	650195.400	660192.000
Northern	P3	16	650221.300	660194.500
Northern	P4	12	650240.900	660195.900
Northern	P5	6	650247.900	660196.800
Northern	P6	34	650264.200	660197.600
Western	P7	1	650195.400	660152.200
Western	P8	23	650201.900	660117.500
Western	P9	3	650210.500	660070.200

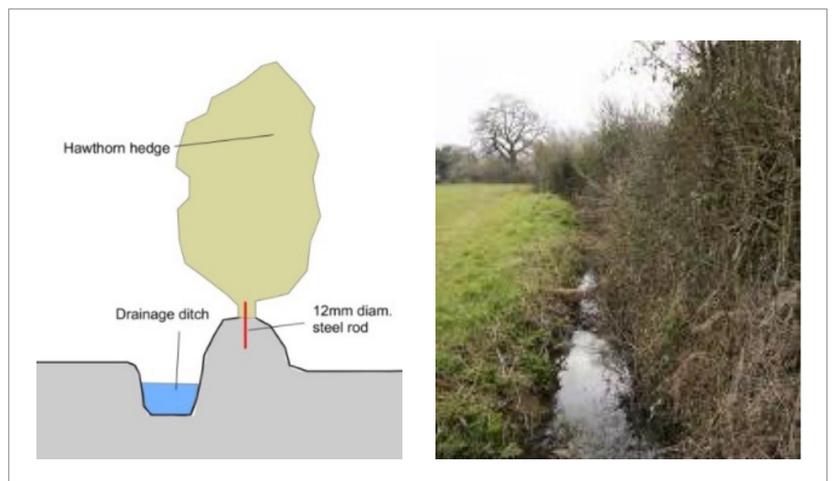
*The legal boundary defined by these coordinates are straight lines connecting the change points for each boundary segment as illustrated on map B. This definition by coordinates takes precedence over all other evidence for the boundary location, except for the defined physical boundary markers (Points 1 to 9), should they remain extant.

Description of the defined legal boundary

1 - Northern boundary segment - A to B

There is an existing boundary feature at this location, consisting of a hawthorn hedge on a low earthen bank, with a drainage ditch running parallel to the hedge and bank, on its northern side. Six markers, each consisting of a 40cm length of 12mm \varnothing steel reinforcing bar painted red, with a yellow plastic cap, have been driven into the top of the bank at points approximately on the centre line of the hedge and spaced at intervals along the boundary, as shown in the attached map. Each cap has a unique ID as detailed in the Defined Legal Boundary Coordinate Table. The marker locations are identified as points P1, P2, P3, P4, P5 and P6 on the associated map. The location of the centre of the bar diameter constitutes the point positions on the legal boundary and this legal boundary consists of straight lines joining each of these points. The plane of the legal boundary extends vertically upwards and downwards from these lines.

The location of each point has been measured precisely and its location expressed in ITM15 coordinates in the associated Defined Legal Boundary Coordinates Table. In the event of the physical boundary markers decaying, being removed, damaged, or repositioned, whether as a result of natural earth movement, hedge growth, or human action, and whether accidental or deliberate, or for any other reason, the location of the legal boundary change points shall be as defined by the ITM coordinates. These definitions take precedence over any other description. They also take precedence over any other physical feature, except the physical boundary markers, including the hedge, earthen bank, or ditch.



2- Western boundary segment – A to C

This is a newly set out boundary which consists of three 5cm x 5cm wooden pegs driven into the ground into the top of which a nail has been inserted. The end point at the north of this segment coincides with the steel rebar P1, that forms the extremity of the northern boundary segment. The remaining peg locations are identified as points P7, P8 and P9 on the associated map. The nail heads constitute point locations on the legal boundary and this legal boundary consists of straight lines joining each of these points.

The plane of the legal boundary extends vertically upwards and downwards from these lines. The location of each point has been measured precisely and its location expressed in ITM coordinates in the associated Defined Boundary Coordinates table. In cases where a physical boundary feature is to be erected along the line of the legal boundary, previously defined by coordinates, it is prudent to allow a provision for a final verification and potential rectification to align the defined legal boundary with the newly placed physical feature, where necessary.

Accuracy Statement for Map B

The control was surveyed using GNSS in NRTK mode on the ITM15 spatial reference framework and using the RICS best practice guidelines. An accuracy of +/- 0.014m was achieved for the control at a 95% confidence level. The topographic detail was surveyed using a Leica reflector-less total station and an accuracy for hard detail was calculated at 0.044m at a 65% confidence level. The international norm for accuracy of boundary surveying is +/-0.050m and I certify that I have achieved this norm.

Signed: _____ Dated: 5th May 2023
 Joe Bloggs, MSCSI/MRICS,
 SCSi Membership Number 11111

Signed and delivered when dated as a Deed.

The undersigned parties hereto hereby consent to the foregoing amendments and apply for and consent to the amendment of the Land Registry Map in the said Folios as aforesaid and confirm the boundaries shown on the said maps lodged herewith being the correct boundaries between their respective folios.

Signed: (Owner of Property 1)

(Print name of owner of Property 1)

Address: (Insert home address of landowner here)

.....

Dated:

Signed: (Owner of Property 2)

(Print name of owner of Property 2)

Address: (Insert home address of landowner here)

.....

Dated:

The above signatures were made in my presence, and I hereby attest that they were made freely and without duress.

Signed: (Witness)

(Print name of Witness)

Address: (Insert address of witness here)

.....

Dated:

Appendix Q - Section 43 of the Land and Conveyancing Law Reform Act 2009

43.— In this Chapter, unless the context otherwise requires—

“adjoining” includes adjacent;

“adjoining owner” means the owner of any estate or interest in a building or unbuilt-on land adjoining that of the building owner;

“building” includes part of a building;

“building owner” means the owner for the time being of any estate or interest in a building, or unbuilt-on land, who wishes to carry out works to a party structure;

“the court” means the District Court;

“party structure” means any arch, ceiling, ditch, fence, floor, hedge, partition, shrub, tree, wall or other structure which horizontally, vertically or in any other way—

(a) divides adjoining and separately owned buildings, or

(b) is situated at, or on, or so close to, the boundary line between adjoining and separately owned buildings, or between such buildings and unbuilt-on lands that it is impossible, or not reasonably practical to carry out works to the structure without access to the adjoining building or unbuilt-on land, and includes any such structure which is—

(i) situated entirely in, or on, one of the adjoining buildings or unbuilt-on lands, or

(ii) straddles the boundary line between adjoining buildings or between such buildings and unbuilt-on lands and is either co-owned by their respective owners or subject to some division of ownership between them;

“works ” include—

(a) carrying out works of adjustment, alteration, cutting into or away, decoration, demolition, improvement, lowering, maintenance, raising, renewal, repair, replacement, strengthening or taking down,

(b) cutting, treating or replacing any hedge, tree or shrub,

(c) clearing or filling in ditches,

(d) ascertaining the course of cables, drains, pipes, sewers, wires or other conduits and clearing, renewing, repairing or replacing them,

(e) carrying out inspections, drawing up plans and performing other tasks requisite for, incidental to or consequential on any works falling within paragraphs (a) to (d);

“works order” means an order under section 45 (1).



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