

# OPS INFO FOR ENTO AND TORP CTR

## VERSION HISTORY

Version	Date	References	Description
1.0	2014-09-15		First edition
1.1	2015-01-13	Chapter 2.1	Classification of Torp CTR based on new BSL F 1-1 (SERA)
1.2	2015-08-20	Chapter 2.3	New RNAV (GNSS) approach procedures for both runways
1.3	2015-12-01	Chapters 1.11 and 2.7	Revised restrictions based on new noise abatement procedures with effect from 2015-12-01.
1.4	2016-10-01	Chapter 2.7	Revised noise abatement procedures for aircraft with certified noise level below 72dB(A)
2.0	2018-09-13		Updates related to AIRAC 13 SEP 2018, incl. introduction of ILS CAT II for RWY18. Modified design of holding point on TWY W3. Naming of Main Apron taxiway TANGO.
2.1	2018-09-24	Chapter 1.6	New map Main Apron
2.2	2019-06-29	Chapter 1.7	New map GA Apron, including revised operational procedures
2.3	2021-05-07	Chapters 1.1 and 2.10	Information on new maps in AIP Norway (from 21 JUN 2021). New reference for unmanned aircraft system (UAS/drones)
2.4	2022-09-05	Chapters 1.1, 1.6, 1.7, 2.3, 2.4 and 2.5	Editorial updates, incl. removal of links to specific pages in AIP Norway. New maps and descriptions for Main Apron and GA Apron.

## GENERAL

This document contains data which is relevant for all types of aviation related operations at Sandefjord Airport Torp (ENTO) and in the airspace surrounding the airport (Torp control zone/CTR) – both with manned and unmanned aircraft, and for aerial sporting activities.

The information provided is either additional or supplemental to information included in Aeronautical Information Publication (AIP) Norway, refer the following internet [page](#).

The information is divided into two chapters:

1. Airport
2. Airspace

Chapter 1 contains descriptions of activities, regulations and limitations at ENTO.

Chapter 2 contains descriptions of activities, regulations and limitations in Torp CTR, including:

- Operations at ENTO, incl. school and training flights
- Operations at Jarlsberg airport (ENJB), incl. aerial sporting activities
- Operations at Tønsberg hospital (ENTH)
- Operations with Unmanned Aircraft System (UAS)

## 1. AIRPORT

### 1.1 RUNWAY AND TAXIWAYS

Detailed information on runway (RWY) and taxiways (TWYs) are published in AIP Norway under PART 3 AERODROMES, AD 2 AERODROMES, ENTO SANDEFJORD/Torp.

### 1.2 APRONS

There are multiple Aprons at the airport, including:

- Main Apron – located by the main terminal and is exclusively used by scheduled and charter aircraft.
- General Aviation (GA) Apron – located north of TWY W3 and is mainly used by school aircraft (helicopter and fixed wing) and visiting aircraft.
- Club Apron – located northeast of TWY Y and is used by Sandefjord Flyklubb.
- Hangar Aprons – located in front of hangars used by various aircraft operators at the airport.

Additionally, there is an apron east of TWY Y used for de-icing of aircraft. More information about Main, GA, Club and Deice aprons is presented below.

Startup of engines for all types of aircraft from any Apron are subject to approval from Torp control tower (Torp TWR) – except for aircraft which have completed de-icing and light aircraft with piston engine(s). The latter aircraft shall always indicate whether engine runup has – or has not – been completed when making the first call to Torp TWR.

### 1.3 PRIOR PERMISSION REQUEST (PPR)

The airport has limited space for parking of visiting aircraft. For GA flights planning to park at ENTO, PPR is therefore required before the flight to ENTO can take place. T: (+47) 33 42 70 30. Flights with home base at ENTO, or requiring maintenance at local repair facilities, or refueling without need for parking, are exempted from PPR.

Additionally, ground handling service is mandatory for GA flights with MTOM above 2000 KG, and for all GA flights arriving from a departure airport outside the Schengen area.

### 1.4 REDUCED RUNWAY SEPARATION MINIMA

Reduced runway separation minima is being used between light one or two engine propeller aircraft with MTOM at or below 7000 KG, refer ENTO AD 2.20 item 7.

In cases where a light propeller aircraft experiences technical problems after landing (e.g. loss of engine power), the pilot shall attempt to manoeuvre the aircraft to the edge of the runway, and immediately inform Torp TWR about the situation.

This procedure will improve the opportunity for a succeeding aircraft – landing based on reduced runway separation minima – to avoid coming in the proximity of the aircraft with technical problems.

## 1.5 ICAO CODE LETTERS FOR OPERATIONS ON AN AIRPORT

The text on this page uses references to ICAO aircraft code letters for operations on an airport, and the table below identifies the actual dimensions for relevant code letters.

Code letter	Wing span	Wheel span (max distance between the outside of main landing gears)
A	Up to 15m (and inclusive)	Up to 4,5m (and inclusive)
B	15m to 24m (and inclusive)	4,5m to 6m (and inclusive)
C	24m to 36m (and inclusive)	6m to 9m (and inclusive)
D	36m to 52m (and inclusive)	9m to 14m (and inclusive)

Additionally, there are restrictions based on an aircraft's wheel base (maximum distance between nose wheel and the main landing gear), but this subject is not elaborated in this context.

## 1.6 MAIN APRON

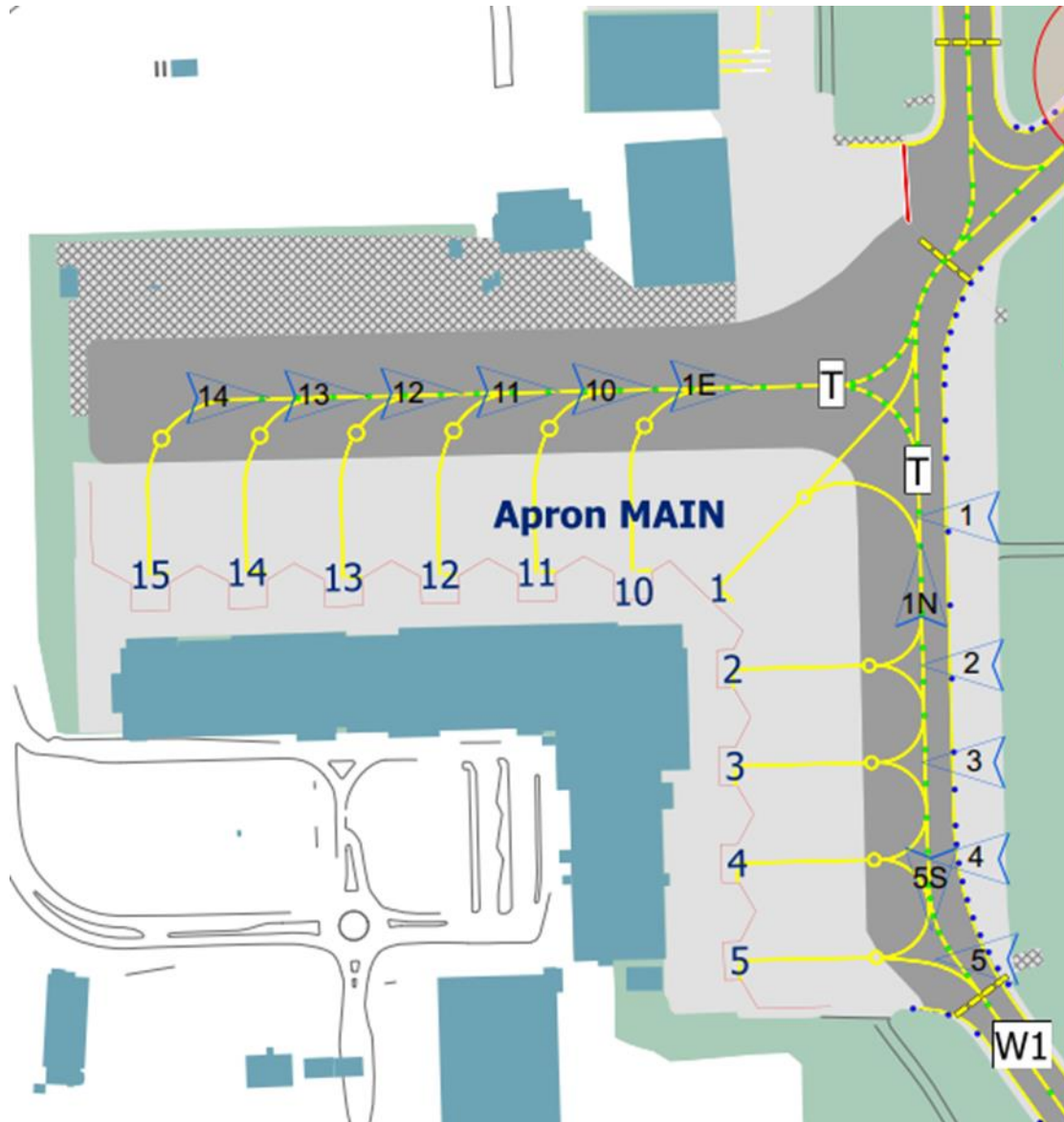
An Apron Taxiway (TWY) named "TANGO" has been established on the Main Apron between Stand 15 and TWYs W1 and W2. The Main Apron is not a part of the manoeuvring area on the airport, and is consequently not under control by Torp TWR. However, approvals shall be obtained from Torp Tower prior to the following activities:

- Startup and Pushback from parking stands, refer AIP Norge ENTO AD 2-20 items 4 and 5 and AD 2 ENTO 2-2.
- Taxiing with aircraft to/from Parking Stand via Apron TWY TANGO
- Taxiing with aircraft via Apron TWY TANGO between TWYs W1 and W2 (in both directions)
- Towing of aircraft between parking stands and hangars in the technical area via Apron TWY TANGO
- Movements with airport inspection vehicles on Apron TWY TANGO when Low Visibility Procedure (LVP) is in operation

Main Apron has a total of 11 parking stands, including:

- 5 stands on the eastern side of the terminal building (Stands 2, 3, 4 and 5 = code C, Stand 1 = code D)
- 6 stands on the northern side of the terminal building (Stands 10, 11, 12, 13, 14 and 15 = code C)

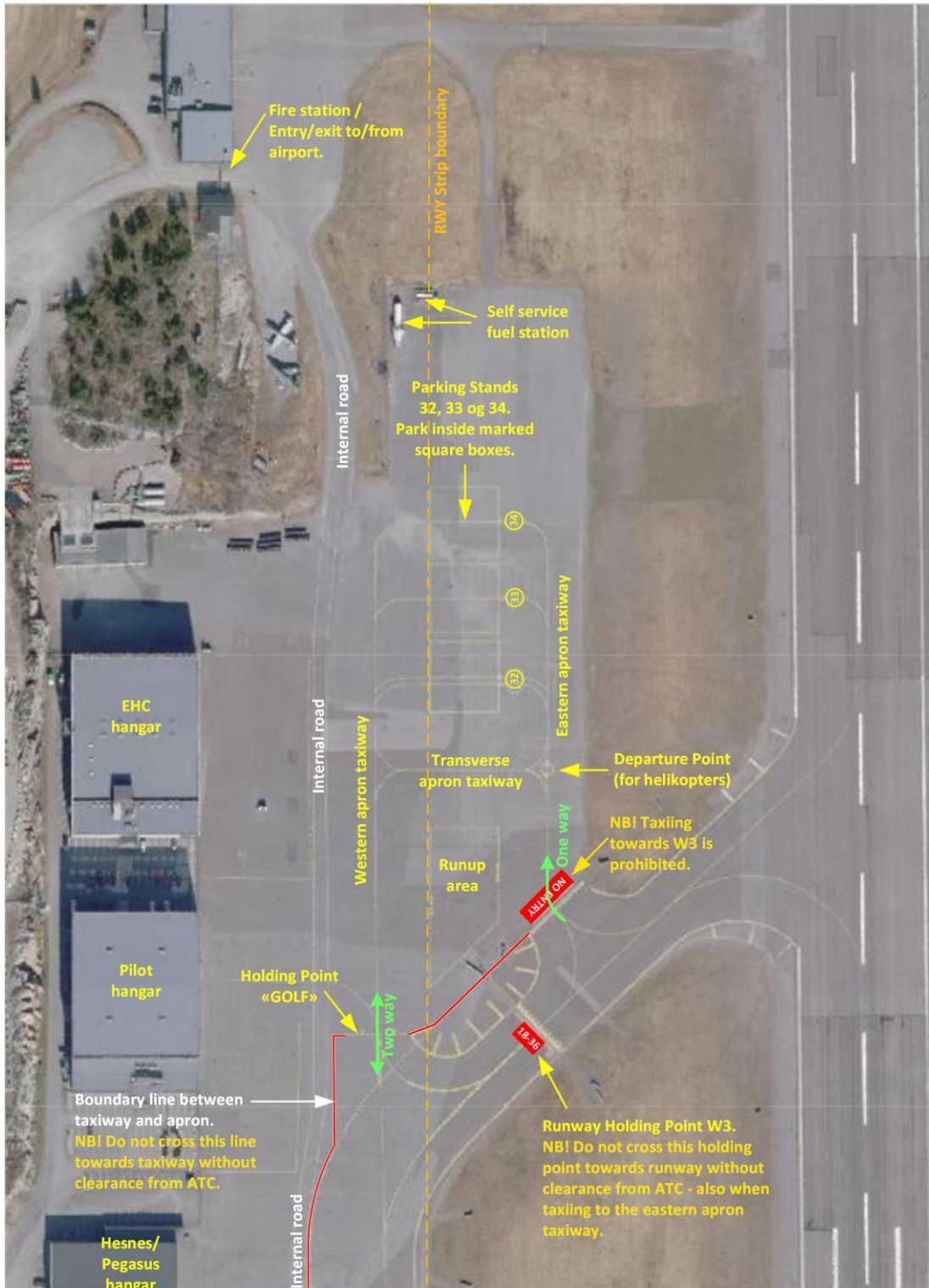
Overview of main apron (extracted from AIP Norge AD 2 ENTO 2-2):



## 1.7 GENERAL AVIATION (GA) APRON

GA apron is not a part of the manoeuvring area on the airport, and is consequently not under control by Torp TWR – even if ATC instructions of types "air taxi to departure point", "taxi to runup area" or "taxi to holding point GOLF" will be issued on request for taxiing prior to departure. All aircraft movements (with fixed wing or helicopter) on the GA apron is subsequently pilot's own responsibility.

Overview of GA apron:





Parts of the GA apron (the area east of the western apron taxiway) is located inside the RWY strip, but the Norwegian Civil Aviation Administration has given exemptions for taxiing and/or parking by aircraft with ICAO code letter A and B on this part of the apron.

Two parallel apron taxiways are established on GA apron (one on eastern and one on the western side), and one transverse apron taxiway connecting the two parallel ones. Taxiing on the apron should – whenever possible – be performed along these taxiways.

A “runup area” is established on the southern part of GA Apron, and this area shall normally be used by aircraft requiring runup before departure. Up to three aircraft with MTOM<2000KG can use this area simultaneously.

Entry to and exit from the “runup area” is allowed from all directions – except to/from the south (due to adjacent TWY W3 and obstacles).

Taxiing across the “runup area” is allowed – but only in cases where such taxiing does not conflict with aircraft using the area for runup, including aircraft entering or leaving the area.

A holding point named “GOLF” is established at the southern end of the western apron taxiway. All aircraft leaving the GA Apron towards TWY W3 will be instructed to taxi to (or via) this holding point.

**NB!** The eastern apron taxiway is closed for taxiing from GA apron towards TWY W3, see signs/markings “NO ENTRY”.

When taxiing from TWY W3 to GA apron, both the eastern and western apron taxiways may be used – provided that the western apron taxiway is not blocked by aircraft taxiing in the opposite direction.

Aviation academies European Helicopter Center (EHC), Pilot Flight Academy (PFA) and Luftfartsskolen (CAE) are operating from hangars next to the GA apron, and aircraft from these academies represents the major portion of the traffic volume on the apron.

On the eastern apron taxiway, a “Departure Point” has been established for use by helicopters. The “Departure Point” is being used both for departures and landings by helicopters on GA apron, and for this reason a considerable amount of air taxiing can be expected between this point and the EHC hangar. Note that both departures and landings from/to “Departure Point” normally take place in the same direction as from the RWY-in-use.

Note that an internal road for vehicles is located between the western apron taxiways and the hangars, and that a considerable amount of traffic can be expected on this road. According to the regulations for use of vehicles at the airport, the vehicles shall always give way to aircraft on the apron, but pilots should anyway be vigilant when maneuvering in the proximity of the internal road.

A total of 3 marked aircraft parking stands exist on the GA apron – with dimensions for aircraft up to and including ICAO code letter B.

Parking of aircraft which are subject to requirement for ground handling service shall take place in accordance with instructions from the handling agent.

When using the self service fuel facility, the aircraft should only be parked by the facility when fuelling takes place. When fuelling has been completed, the aircraft should be moved to an appropriate parking stand (if obtained through PPR) – unless departure has been planned in the near future.

Exit and entry of the airport shall take place through the gate at the fire station on the northern side of the GA apron. Instructions can be found next to the door bell on the wall at the fire station. Passport control is required for crew and passengers arriving from a non-Schengen country, and such flights must be coordinated specifically with the airport authorities when PPR is obtained.

## 1.8 CLUB APRON

Parking of aircraft on the apron in front of Sandefjord Flyklubbs hangar northeast of TWY Y (named Club Apron) is limited to aircraft operated by Sandefjord Flyklubb, and for special operations with LN-WND (Dakota) and LN-WNH (Harward).

Parking of other aircraft on Club Apron is only allowed if specific authorisation has been obtained from the airport authority, T: (+47) 33 42 70 30.

## 1.9 DE-ICING APRON

The de-icing apron is located on the eastern side of TWY Y (in the extension of TWY C), and is used to de-ice aircraft during the winter season, refer AIP Norway AD 2 ENTO 2-5.

The de-icing apron can also be used for parking of aircraft in certain cases, but normally only during periods where de-icing is not required.

## 1.10 WEATHER CONDITIONS

Prevailing wind directions are from north and south (mainly along RWY direction).

Reduced visibility may be expected around the months of November and March (main periods for fog formation), but also in other periods with high humidity in combination with low temperatures during night and morning hours.

Snow fall and frost may be expected between October and March, but large annual variations can also be expected.

## 1.11 NOISE ABATEMENT REGULATIONS AT THE AIRPORT

### Use of Auxillary Power Unit (APU):

Use of APU shall not exceed 5 minutes after landing or 5 minutes prior to departure.

### Engine tests:

Engine test at parking stand is only allowed when a technical problem exists at start up for a scheduled or a non-scheduled flight, and where the operator has an immediate need to decide if the aircraft requires repairs before it can be used in normal operational service.

Engine test as part of technical maintenance shall normally be performed in the engine test area adjacent to TWY B. However, engine test at idle thrust can be performed outside hangars when the use of the engine test area, including taxiing, will result in a higher total noise load.

Engine test as part of technical maintenance outside the airport opening hours is only allowed when specific approval has been received from Sandefjord Lufthavn AS.

## 2. AIRSPACE

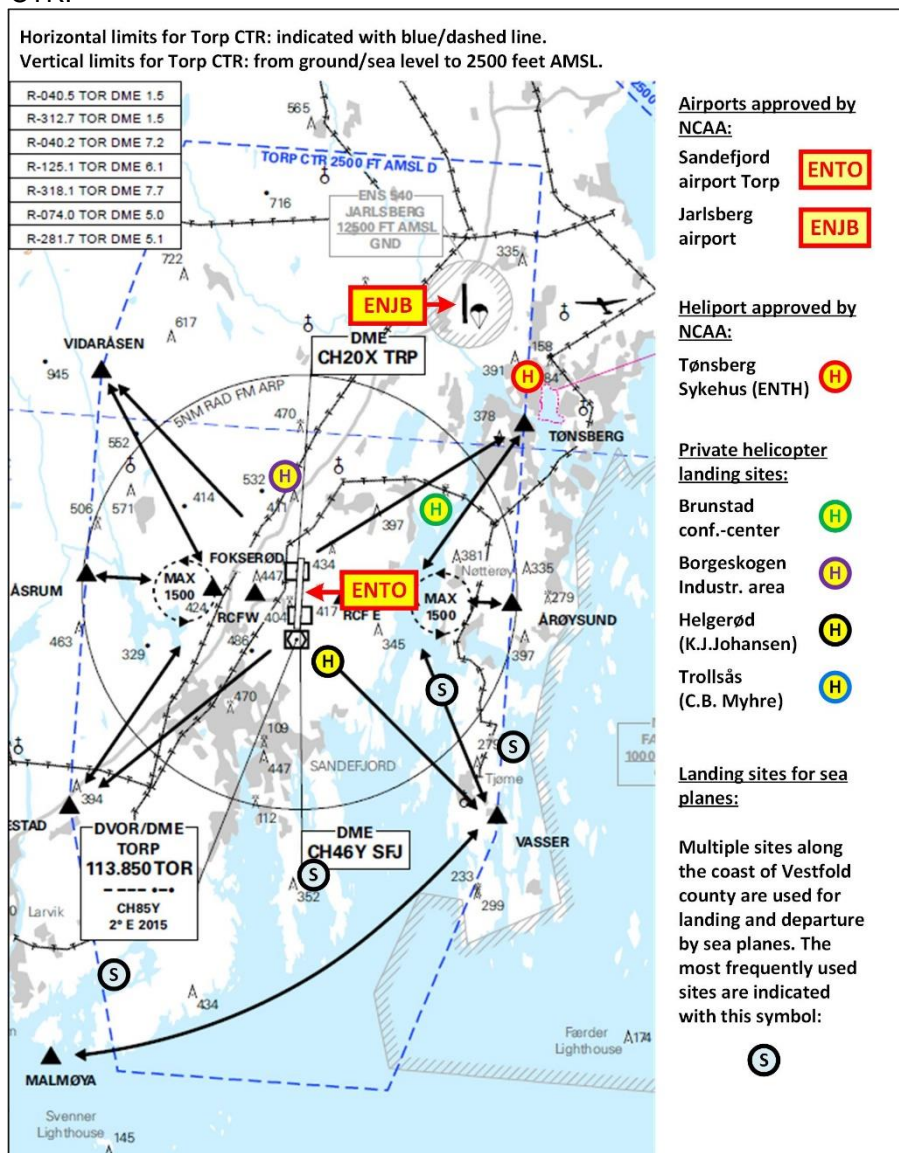
### 2.1 CONTROL ZONE (CTR)

Within the opening hours for ATC (for Torp tower) Torp CTR is defined as airspace class "D" – with mandatory use of two-way radio communication (RMZ) and transponder (TMZ). Operation in airspace class "D" is subject to clearance from ATC and requires filing of a flight plan – either by filing a full flight plan prior to departure, or by filing an abbreviated flight plan prior to flying in the relevant part of the airspace.

Outside opening hours for ATC (refer BSL F 1-1, §15, SERA.6001) Torp CTR is defined as airspace class "G" – with mandatory use of two-way radio communication (RMZ). Although no requirement for use of transponder exists in airspace class "G", it is recommended that such equipment should be used. There are no requirements for flight plans or clearances in class "G" airspace, but aircraft are required to transmit blind position reports.

Normal opening hours for ATC are published in AIP Norway, but since these hours often varies due delays for scheduled traffic, the ATIS is used to notify when the CTR is defined as class "G" airspace.

Map of Torp CTR:





## 2.2 SURVEILLANCE SERVICE BASED ON RADAR

Use of transponder is mandatory for flights in Torp control zone, but Torp TWR can give exemption to this requirement for individual flights, eg. in cases where a flight is inbound to ENTO for repair of an unserviceable transponder.

The surveillance service is used to control and organize the traffic inside the control zone, and to issue traffic information and advisories to involved aircraft.

The surveillance service is primarily based on radar data from Torp radar at Kihlås (located northeast of the airport), and from Haukåsen radar northeast of Oslo. Loss of data from these radars will cause severe restrictions for VFR flights in the control zone, including use of traffic patterns at ENTO and ENJB, transit flight and aerial sporting activities.

Specific restrictions will be published by NOTAM and will be broadcasted on ATIS.

## 2.3 INSTRUMENT APPROACH AND DEPARTURE PROCEDURES

The following instrument approach procedures are available at ENTO:

- ENTO 4-9: STAR (RNAV1 GNSS) RWY 18
- ENTO 4-11: STAR (RNAV1 GNSS) RWY 36
- ENTO 5-1: ILS or LOC RWY 18 CAT II
- ENTO 5-3: RNP RWY 18
- ENTO 5-5: VOR RWY 18
- ENTO 5-7: ILS or LOC RWY 36
- ENTO 5-9: RNP RWY 36
- ENTO 5-11: VOR RWY 36

The following instrument departure procedures are available at ENTO:

- ENTO 4-1: SID (RNAV1 GNSS) RWY 18
- ENTO 4-3: Omni-directional Departure RWY 18\*
- ENTO 4-5: SID (RNAV1 GNSS) RWY 36
- ENTO 4-7: Omni-directional Departure RWY 36\*

\*Omni-directional Departure is normally used for aircraft without RNAV1 capability, or when a regular SID cannot be connected to the route in the FPL.

## 2.4 VFR GENERAL AVIATION

Multiple procedures for VFR operations in Torp control zone exists, including:

- ENTO 6-1: VAC – Visual Approach Chart (MTOM under 3000 KG)
- ENTO 6-3: Landing Patterns Light Aircraft
- ENTO 6-4: Landing Patterns Helicopter
- ENTO 6-5: Training Patterns and Areas Helicopter

Routings for VFR flights with MTOM above 3000 KG will be decided in each case, e.g. based on assessment of aircraft type, weather conditions and other relevant traffic.

Special attention should be given to the following elements in ENTO 6-1:

- Maximum altitudes have been established to separate various traffic patterns for both VFR and IFR traffic – including IFR traffic performing visual departures/approaches.
  - A maximum altitude of 1000 FT for helicopters inside 5 NM radius from the airport.
  - A maximum altitude of 1000 FT for light aircraft and helicopters transiting the CTR on track Vasser-Malmøya.
  - A maximum altitude of 1500 FT for light aircraft and helicopters on all VFR routes entering the CTR.
  - A maximum altitude of 2000 FT for light aircraft and helicopters on all VFR routes exiting the CTR.

- Clearance to deviate the maximum altitudes may be received if requested, but is always subject to the current traffic situation.
- Entry and exit of the control zone via VFR reporting point "Tønsberg" shall be strictly adhered to in order to avoid conflicts with traffic in traffic circuits and other activities in the area around Jarlsberg airport.
- VFR reporting point "Fokserød" is not located at the intersection on highway E18 with the same name, but is located approximately 1 NM west of this intersection. It is important that flights inbound to this VFR reporting point adheres to the correct location in order to avoid conflicts with traffic in Downwind Holding on the western side of the airport.

Special attention should be given to the following elements in ENTO 6-3:

- Downwind legs shall be flown parallel to the RWY centre line offset by 1 NM.
- Downwind Holding shall be flown as indicated on the map – with start and end of downwind and upwind legs reciprocal to the RWY extremities.
- When receiving instruction to extend a downwind leg, the pilot shall ensure that the aircraft does not drift towards the final approach track for the relevant RWY – as this may cause TCAS alerts for aircraft established on the final track. This problem has been observed on numerous occasions, and especially on right downwind for RWY18 – where aircraft has a tendency to drift towards final RWY18 – probably because of the underlying highway E-18 which turns in a northeasterly direction in this area.

Special attention should be given to the following elements in ENTO 6-4:

- Helicopters shall be flown at a maximum altitude of 1000 FT inside a 5 NM radius from the airport – unless otherwise cleared by Torp TWR.
- When sequencing helicopters in relation to other traffic, helicopters will normally be instructed to hold over Checkpoint East or West, or to join the downwind leg for the RWY in use.

## 2.5 HELICOPTER TRAINING OPERATIONS

Helicopter training operations are performed on/from taxiway areas "YANKEE SOUTH" (south of Deice platform) and "BRAVO EAST" (east of TWY-Y), according to procedures described in AIP Norway AD 2 on pages ENTO AD 2.23 (Additional information, item 5) and ENTO 6-5 (Training Patterns and Areas Helicopter).

Additionally, an agreement between Sandefjord Lufthavn AS, Avinor Torp TWR and identified helicopter operators exists. This agreement is published on [www.torp.no](http://www.torp.no) and includes procedures which are supplementary to the procedures identified in AIP Norway above.

*NOTE: The referenced agreement is only available in Norwegian language, but can be translated to English on demand.*

## 2.6 OTHER TRAINING OPERATIONS

There is a large volume of training operations with light aircraft at the airport, and operations in traffic circuits in combination with touch and go training on the runway constitutes the major part of such operations.

In certain, but infrequent periods, the same type of operations will be performed by larger aircraft (e.g. Boeing 737, Hercules and DC3 Dakota). During such periods, training operations with light aircraft in the traffic circuits will normally be suspended due to wake turbulence limitations.

IFR training flights are not allowed when Low Visibility Procedure (LVP) is in operation at ENTO.

## 2.7 AIRSPACE NOISE ABATEMENT RESTRICTIONS

### Restrictions for jet aircraft:

After departure RWY 18 jet powered aircraft shall climb straight ahead to TO909 (RNAV SIDs) or DME 5 TOR (OMNI SID) before turning on track.

### Restrictions for fighter aircraft:

Fighter aircraft shall not use after burner unless the type of mission or safety reasons requires such use.

### Restrictions for training flights:

Training flights for ACFT with MTOM 5700 KG or below involving repetitive use of traffic patterns for the RWY are limited to MON-FRI 0800-2000, SAT 0800-1700 and SUN 1300-1800 (local times). Based on application, Sandefjord Lufthavn AS may permit individual ACFT with MTOM 5700 KG or below and a certified noise level below 72dB(A) to perform training flights involving repetitive use of traffic patterns for the RWY inside the ATS opening hours, but with the exception of SUN 0600-1200 (local times).

However, the flights mentioned above are not allowed on 1 JAN, Maundy Thursday, Good Friday, Easter Sunday, 1 MAY, 17 MAY, Ascension Day, Whit Sunday, Christmas Day and Boxing Day.

Training flights for ACFT with MTOM above 5700 KG involving repetitive use of traffic patterns for the RWY are limited to MON-FRI 0800-2000 and SAT 0800-1700 (local times).

However, such flights are not allowed on 1 JAN, Maundy Thursday, Good Friday, 1 MAY, 17 MAY, Ascension Day, Christmas Day and Boxing Day.

Training flights for HEL involving repetitive use of traffic patterns for TWY B and TWY Y are limited to MON-FRI 0800-2000 and SAT 0800-1700 (local times).

However, such flights are not allowed on 1 JAN, Maundy Thursday, Good Friday, 1 MAY, 17 MAY, Ascension Day, Christmas Day and Boxing Day.

Based on application, Sandefjord Lufthavn AS may give dispensation for training flights involving repetitive use of traffic patterns in the night period MON-THUR 2000-2200 (local times) in calendar months OCT and MAR.

*NOTE: Additional traffic restrictions may occur due to limitations in ATC and/or aerodrome capacities. Check NOTAM for relevant restrictions.*

## 2.8 OPERATIONS AT JARLSBERG AIRPORT (ENJB)

Jarlsberg airport is located in the northeastern corner of Torp control zone, and is controlled by Torp TWR based on an agreement between Sandefjord Lufthavn AS, Avinor Torp TWR and Jarlsberg Luftsporscenter. The agreement is published on [www.torp.no](http://www.torp.no) and regulates all operations in the airspace around Jarlsberg airport.

*NOTE: The referenced agreement is only available in Norwegian language, but can be translated to English on demand.*

Flights intending to use Jarlsberg airport shall meet the conditions set by the local airport operator (Jarlsberg Luftsporscenter), and adhere to Operational Rules for Jarlsberg airport – published on [www.jarlsbergluftsporscenter.no](http://www.jarlsbergluftsporscenter.no).

Operations at Jarlsberg is limited to the daylight period (including twilight periods), and will normally only take place under visual meteorological conditions (VMC).

The level of activities at Jarlsberg airport may be very high in certain periods, and the activities mainly consist of:

- Use of traffic circuits combined with touch and go training on the runway for light and ultralight aircraft.

- Parachute jumping exercise
- Operations with model aircraft

Note that special restrictions exist when parachute jumping exercise takes place (i.e. when jumpers are in the air):

- No departures from the airport are allowed
- Inbound traffic is not allowed to enter local traffic circuits

Aircraft already flying in the local traffic circuits when a parachute jumping exercise (PJE) is about to take place, must leave the traffic circuit before the PJE can start.

Special attention should be given to operations of model aircraft inside a specific area at the southwestern part of Jarlsberg airport. Operations with model aircraft is limited vertically to 1000 FT, and a safe altitude of minimum 1500 FT applies to aircraft overflying this area.

## 2.9 OPERATIONS AT TØNSBERG HOSPITAL (ENTH)

Tønsberg hospital is located inside Torp control zone and has a landing site for helicopters. Norsk Luftambulans is the main operator of ambulance helicopters to and from the hospital, and these helicopters will normally be given priority over other traffic in this area – and especially during periods with marginal weather conditions.

Note that Norsk Luftambulans has established instrument procedures for both arrivals and departures at ENTH, named «RNAV GNSS 217».

## 2.10 OPERATIONS WITH UNMANNED AIRCRAFT SYSTEM (UAS)

Operations with Unmanned Aircraft Systems (UAS), also known as drones, in Torp CTR are regulated through the following procedure:

- Procedure for UAS in Torp CTR

The procedure is published on [https://www.torp.no/en/footer/about-torp/ops-info/?lang=en\\_GB](https://www.torp.no/en/footer/about-torp/ops-info/?lang=en_GB).